



TANZANIA

HIV/AIDS Sector Assessment  
and  
Strategy Recommendations

October 12, 2003

**Prepared by**

Mr. David Hales  
Dr. Massawe Augustine  
Dr. Alan Lifson  
Dr. Ferdinand Mugusi  
Ms. B.J. Humplick  
Dr. Raz Stevenson  
Dr. Souleymane Barry, Team Facilitator

**Submitted to**

U.S. Agency for International Development  
Dar es Salam, Tanzania

**Submitted by**

The Synergy Project/Social and Scientific Systems, Inc.  
1101 Vermont Avenue, N.W., Suite 900  
Washington, D.C.  
Telephone: (202) 842-2939  
Fax: (202) 842-7646

USAID Contract: HRN-C-00-99-00005-00



This work was supported by The Synergy Project, through USAID contract HRN-C-00-99-00005-00. The interpretations expressed in this paper are those of the authors and do not necessarily reflect the views of Social & Scientific Systems, Inc., or the United States Agency for International Development.

## **Acknowledgments**

The HIV/AIDS assessment team is grateful to USAID/Tanzania staff, and to Lisbeth Loughran in particular, for their excellent support in completing this important assignment. Ms. Loughran directed and supervised this review with great commitment. She provided important insights and facilitated contacts and brainstorming with all organizations and resource persons.

The team is also grateful for the welcome and collaboration demonstrated by The Tanzania Commission for AIDS, Zanzibar AIDS Commission, the Chief Medical Officer, Dr. Gabriel L. Upunda, staff of the Ministry of Health in mainland Tanzania and Zanzibar, regional and district medical offices, as well as implementing partners supported by USAID and other development partners, religious leaders, local nongovernmental organizations, and all development partners. Finally, the team thanks the Synergy staff, particularly Deanna Crouse and Dorothy Bell, for their support.

## Contents

Acknowledgments.....	1
Contents .....	2
Acronyms.....	4
Executive Summary .....	5
1. Current Status of the HIV/AIDS Epidemic .....	11
1.1 Typology of the HIV/AIDS Epidemic .....	11
1.1.1 Tanzania Mainland.....	11
1.1.2. Zanzibar .....	12
1.2 Adolescents, Out-of-School Youth, and HIV/AIDS in Tanzania.....	13
1.3 Demographic Impact.....	13
1.4 HIV/AIDS and Other Sectors .....	13
1.5 Poverty Profile in Tanzania and HIV/AIDS .....	14
1.6 Other Determinants of the HIV/AIDS Epidemic.....	14
2. Leadership Assessment.....	15
3. HIV/AIDS Prevention Programs .....	17
3.1 Introduction.....	17
3.2 Current Prevention Situation: Key Findings.....	18
3.3 Prevention Strategy Map.....	22
3.3.1 Knowledge .....	23
3.3.2 Institutional Capacity .....	24
3.3.3 Policy Environment .....	24
3.3.4 Products and Services .....	24
3.4 Identifying Strategic Priorities.....	25
3.5 Strategic Priorities.....	26
3.5.1 Health Workers .....	26
3.5.2 At-Risk Populations .....	26
3.5.3 Nongovernmental Organizations .....	27
3.5.4 Private Sector .....	27
3.5.5 Financing Mechanisms .....	28
3.5.6 Social Marketing.....	28
3.5.7 Prevention of Mother-to-Child Transmission.....	29
3.5.8 Voluntary Counseling and Testing .....	29
4. HIV/AIDS Care and Treatment Programs.....	30
4.1 Introduction.....	30
4.2 Current Situation.....	30
4.2.1 HIV Disease and Co-morbidities .....	30
4.2.2 Treatment Guidelines for Patients with HIV .....	32
4.2.3 Current Situation with Antiretroviral Therapy .....	33
4.2.4 Financial Support for HIV Therapy .....	34
4.3 Key Strategic Issues for Care and Treatment for HIV .....	34
4.3.1 Inadequate Staff Training/Education .....	35
4.3.2 Limited Awareness of the General Population About the Need for Early HIV Detection .....	38

4.3.3 Limited Education of HIV-Positive Patients and Their Families About Beneficial Health Measures, Including Nutrition .....	39
4.3.4 Inadequate Systems for Laboratory Testing .....	40
4.3.5 Inadequate Capacity for Treatment of Opportunistic Infections .....	42
4.3.6 Limited Capacity for Follow-up with Patients on Antiretroviral Therapy .....	43
4.3.7 Inadequate Systems for Monitoring and Evaluation.....	44
4.3.8 Vertical or Integrated Programs for Antiretroviral Therapy.....	46
4.3.9 Public/Private Partnerships .....	46
4.3.10 Linkage of Antiretroviral Treatment with Other HIV Programs .....	47
4.4 Treatment and Prevention: Opportunities for Linkage .....	49
4.5 Other Issues.....	50
4.5.1 Number of Health Care Personnel .....	50
4.5.2 Other Infrastructure Support.....	51
4.5.3 Management, Accountability, and Supervision .....	51
4.5.4 Stigma .....	52
5. Selected Crosscutting Issues and Gaps .....	54
5.1 In-Service and Pre-service Training in the Health Sector .....	54
5.2 Implementation Monitoring and Evaluation.....	54
5.3 Qualitative Research .....	55
5.4 Financial Resource Envelope for HIV/AIDS .....	56
5.4.1 The Global Fund to Fight AIDS, Tuberculosis and Malaria .....	56
5.4.2 The World Bank Multicountry AIDS Program .....	56
5.4.3 William J. Clinton Presidential Foundation.....	56
5.4.4 The Rapid Funding Envelope .....	56
5.4.5 Abbott Laboratories .....	57
6. Supportive Factors for Expanding the National Responses to HIV/AIDS .....	58
6.1 Strong Donor Collaboration.....	58
6.2 The William J. Clinton Presidential Foundation HIV/AIDS Initiative.....	58
6.3 A Successful Tuberculosis Program .....	59
6.4 Accredited Drug Dispensing Outlet Program.....	59
6.5 USAID/Tanzania Commitment to a Multisector Approach .....	59
6.6 Lessons Learned from the Mbeya Region .....	60
6.7 Lessons Learned from Other Countries .....	60
7. Strategy Recommendations .....	62
7.1 Building the Tanzanian Knowledge Base to Promote HIV/AIDS Action.....	62
7.2 Building Institutional Capacity .....	62
7.3 Policy Environment .....	62
7.4 Products and Services .....	63
Annex A: The Global and Local Resource Environment .....	64
Annex B: Quality Systems: Ministry of Health and USAID/Tanzania .....	68
Annex C: Bibliography .....	74
Annex D: People Interviewed.....	79
Annex E: Scopes of Works and Methodology.....	88

## Acronyms

ABCs	Abstain, Be Faithful or use a Condom
AMREF	African Medical Research Foundation
ARV	Antiretroviral
DHS	Demographic and Health Survey
GTZ	German Technical Cooperation
HAART	Highly active antiretroviral therapy
HIV/AIDS	Human immunodeficiency virus/Acquired immune deficiency syndrome
MTEF	Medium-term expenditure framework
NGO	Nongovernmental organization
NMSF	National Multisector Framework for AIDS
NTLP	National Tuberculosis and Leprosy Program
PER	Public expenditure review
PMTCT	Prevention of mother-to-child transmission
RCH	Reproductive and child health
RFE	Rapid Funding Envelope for AIDS
STD	Sexually transmitted disease
STI	Sexually transmitted infection
TACAIDS	Tanzania Commission for AIDS
TANESA	Tanzania Essential Strategies Against AIDS
TB	Tuberculosis
USAID	United States Agency for International Development
VCT	Voluntary counseling and testing
WAMATA	Walio katika Mapambano na AIDS Tanzania
ZAC	Zanzibar AIDS Commission

## Executive Summary

HIV/AIDS has become firmly established in both urban and rural areas in Tanzania. The alarming spread of the virus in trading centers and border towns and along transportation routes is fueling the epidemic. Recent data from Mbeya Region, which is now benefiting from large-scale effective intervention, indicate an HIV prevalence of 68 percent among commercial sex workers. Although HIV prevalence in Zanzibar is considerably lower than it is on the mainland, numerous risk factors there point to a significant increase of HIV infections if the quality and scope of interventions are not upgraded.

While Tanzanians have lived with a serious generalized HIV/AIDS epidemic for the past twenty years, there has been little perceptible sense of national urgency to address this critical problem. Recently, however, the Government of Tanzania has improved its commitment to fighting HIV/AIDS. The president of Tanzania in 2003 declared HIV/AIDS a national disaster and both the National AIDS Control Program and the Tanzania Commission for AIDS (TACAIDS) are intensifying the national response. The traditional reliance on central and hierarchical leadership to drive the national agenda has minimized the development of shared leadership and the empowerment of civil society, communities, and decentralized structures to address the HIV/AIDS epidemic. The creation of TACAIDS, the Zanzibar AIDS Commission (ZAC), and recent global initiatives—including the President’s Emergency Plan for AIDS Relief—may provide renewed hope for strengthening multisector and multilevel responses to the HIV/AIDS challenge. As importantly, Tanzania can build on several successful demonstration projects and large-scale interventions and related lessons to guide the scaling up of effective interventions.

### HIV/AIDS Prevention

Although a significant number of infections have been and continue to be averted by existing prevention programs, major improvements must be made to the prevention strategy if Tanzania is to rapidly reduce the incidence of infections and the prevalence of AIDS-related disease. Although a number of excellent prevention initiatives are being implemented by government, civil society organizations, and the private sector, these tend to be small, limited in geographic coverage, and generally not coordinated between implementing partners.

Unfortunately, the bulk of Tanzania’s institutional infrastructure—much of which should be making significant contributions in the response to the epidemic—has limited ability to manage the task due to a wide range of constraints. Inadequacies can be found in areas as diverse as care provider knowledge gaps, limitations in human and financial resources, commodity shortages, and poor management capacity. Personnel and other human resource limitations will become progressively more acute in the coming years, particularly in the health and nongovernmental and community-based organization sectors, as the response to the epidemic is scaled up.

Due in large part to the lack of knowledge about HIV/AIDS, stigma is widespread in Tanzania and is having a substantial negative effect on the country's response to the epidemic. Products used for HIV/AIDS prevention, such as condoms and drugs for use by the general public to treat sexually transmitted infections, as well as gloves and disposable needles for use by the health sector, are often not available in sufficient quantities when and where they are needed.

At present, the HIV/AIDS response in Tanzania does not appear to be targeting prevention interventions at populations that are most at risk for infection. Specific at-risk populations, such as highly mobile people, sex workers, truck drivers, fishermen, men who have sex with men, and prisoners, have little or no access to prevention programs in general, much less to programs designed to address their unique circumstances.

That there are no structured and comprehensive in-school programs is an especially serious problem in Tanzania. In-school programs are often controversial but most countries have realized their value in preventing the spread of HIV among young people and have developed mechanisms to reach youth in the classroom. Until recently, Tanzania has ignored these effective prevention measures, much to the detriment of its response to the epidemic. Fortunately, this is being rectified; in-school programs have become a critical priority for TACAIDS, and the Ministry of Education and Culture completed a draft HIV/AIDS strategic plan in August 2003 that addresses this issue.

## **HIV/AIDS Care and Treatment**

Although HIV and AIDS continue to impose heavy burdens on the Tanzanian health care system, care and treatment programs have received grossly inadequate attention to date. An estimated 50 percent to 60 percent of hospital beds are now occupied by patients with HIV/AIDS-related illnesses. Considering the mandate of the President's Emergency Plan for HIV/AIDS Relief the team's review of challenges and opportunities associated with the introduction of antiretroviral therapy drew the following conclusions:

- Antiretroviral therapy should be administered as a vertical program, with an integrated, decentralized strategy for treatment of opportunistic infections and routine follow-up for HIV-infected patients.
- The private sector should be fully included in all aspects of a national antiretroviral program. Any national antiretroviral program should have public/private partnerships as a major operating principle.
- Linkages should be strengthened between antiretroviral treatment programs and other HIV-related programs, including nutrition, testing and counseling centers, programs for pregnant women, and clinics that offer care for tuberculosis and sexually transmitted diseases.
- USAID/Tanzania should provide technical assistance to the major HIV/AIDS care and treatment plan being initiated by the William J. Clinton Presidential Foundation in collaboration with Ministry of Health/National AIDS Control Program and TACAIDS.



The assessment team also reviewed crosscutting challenges associated with training, monitoring and reporting, qualitative research, donor collaboration, and aggregate resources for HIV/AIDS. This assessment highlights the factors that support expanding responses to HIV/AIDS. More detailed reviews of the resource envelope for HIV/AIDS and broad quality issues are included in Annexes A and B, respectively.

## Core Strategic Priorities

The assessment team has identified eight prevention issues, eight care and treatment issues, and four crosscutting issues that should be considered core strategic priorities over the next ten years:

### *Core Strategic Priorities for Prevention Programs*

- *Health Workers.* Given the frontline role of health workers in managing the HIV/AIDS epidemic and the increased understanding of the care and prevention continuum, equipping these workers with the knowledge, skills, and tools required to handle this responsibility should be a priority in Tanzania.
- *At-Risk Populations.* Although Tanzania has a generalized epidemic, extremely high prevalence rates among at-risk populations strongly support the importance of substantially increasing the number and quality of interventions targeted at these groups.
- *Nongovernmental Organizations.* Assuming prevention efforts in Tanzania will be expanded over the next ten years, nongovernmental organizations (NGOs) should have increasing responsibility for managing interventions. Although there is reasonably good capacity among the international NGOs with operations in Tanzania, the local NGO sector is unprepared to handle any increase in responsibility.
- *Private Sector.* Given the gaps in the current response to HIV/AIDS in Tanzania, the private, for-profit sector can and should play a major role in HIV/AIDS prevention in the country.
- *Financing Mechanisms.* Tanzania has a serious problem with absorptive capacity, which will be exacerbated by increasing flows of HIV/AIDS funds into the country over the next few years. It will be crucial to develop funding mechanisms that ensure results and accountability across the board.
- *Social Marketing.* Social marketing has the potential to transform a country's response to the epidemic, particularly if it is used as part of a more integrated private sector approach in Tanzania.
- *Prevention of Mother-to-Child Transmission.* The development of an infrastructure to prevent mother-to-child transmission that can be leveraged by other prevention initiatives presents major challenges and opportunities both for HIV control and more broadly for maternal and child health.
- *Voluntary Counseling and Testing.* Broader coverage of quality voluntary counseling and testing (VCT) services in Tanzania is needed to support both prevention and care and support interventions. There is a particularly glaring deficiency in the availability of targeted VCT services for at-risk populations.

### ***Core Strategic Priorities for HIV Care and Treatment Programs***

- Expand pre-service and in-service training to address the severe shortage of qualified service providers.
- Educate the general public about the methods and benefits of early HIV case detection.
- Improve the laboratory infrastructure to conduct CD4+ counts as appropriate, and to perform basic hematology, chemistry, and other necessary tests.
- Improve case management of opportunistic infections.
- Strengthen the monitoring and evaluation system.
- Establish linkages with other HIV programs, including testing and counseling centers, programs for pregnant women, and clinics that offer treatment for tuberculosis and sexually transmitted diseases.
- Build public-private partnerships and take advantage of substantial capacity and commitment of faith-based health facilities and commercial sector.
- Develop technical networking and support the Ministry of Health in implementing the care and treatment plan.

### ***Core Strategic Priorities for Crosscutting Interventions***

- Support TACAIDS and ZAC in their advocacy, implementation, monitoring, and evaluation work in response to the HIV/AIDS challenges.
- Promote principles of shared leadership.
- Strengthen organizational development and local leadership at district and community levels.
- Build the institutional capacity for qualitative/behavioral research.

## **Strategy Recommendations**

### ***Build the Tanzania HIV/AIDS Knowledge Base for Action***

To bridge the large gap between HIV/AIDS programming and implementation attention must focus on leadership development and motivation of critical groups. A primary goal for the next ten years should be to build an empowering Tanzanian knowledge base that promotes and sustains national mobilization and innovation for addressing the strategic core priorities in the fight against HIV/AIDS.

Primary target groups to lead the development of the Tanzanian knowledge base for actions should include:

- Health workers
- Opinion leaders and decision makers
- Managers of key public and private institutions
- People living with HIV/AIDS
- Champions in the general population

***Build Institutional Capacity***

Bridging the implementation gap on HIV/AIDS will require dedicated attention to issues associated with development and motivation of human resources. Other critical elements for building institutional capacity include the following:

- Build leadership and management systems at the operational level.
- Foster coordination and partnership among implementing organizations.
- Facilitate access to information technology.
- Build in-country capacity for qualitative research.
- Build institutional capacity for care, treatment, and support (e.g., links with the William J. Clinton Presidential Foundation).

***Develop a Supportive Policy Environment***

Developing a supportive policy environment for HIV prevention, care, and support, and addressing critical policy issues will require collaboration between government and development partners as well as engagement of civil society. Accordingly, it will be important to maintain dedicated attention to donor collaboration and to sustain dialogue with government to perform the following:

- Develop a policy on human resources that will include:
  - A monitoring system of the Tanzania workforce in the health sector.
  - Civil service reforms that encourage the Tanzanian government to introduce performance incentives to attract and retain competent personnel.
- Focus on key health-related policy issues (e.g., “unfunded mandates”) such as introduction of postexposure prophylaxis and importation and quality control of drugs and condoms.
- Support complementary mechanisms for timely procurement and distribution of quality drugs and supplies.
- Sustain the policy debate on HIV/AIDS and foster a vocal citizenry for HIV/AIDS control, treatment, and care.
- Support research actions and multisector interventions to minimize organized and informal prostitution.

***Make Products and Services Available***

Bridging the gap between program plans and implementation will require a large increase in the availability of culturally sensitive, quality services and products. Accordingly, the assessment team recommends that future programming:

- Take advantage of the extensive support for antiretroviral therapy to scale up services to prevent mother-to-child transmission (i.e., PMTCT-Plus) and voluntary counseling and testing.
- Establish linkages with other sectors to expand delivery of prevention, support, and mitigation services.

- Scale up balanced behavior change communication interventions and support dedicated interventions that:
  - Promote delay in sexual debut, abstinence until marriage, and faithfulness.
  - Target high-transmission areas and populations with high-risk behaviors, including sex workers, truckers and other migrant people, men who have sex with men, and injecting drug users.
- Support logistics and management of drugs and consumables.

# 1. Current Status of the HIV/AIDS Epidemic

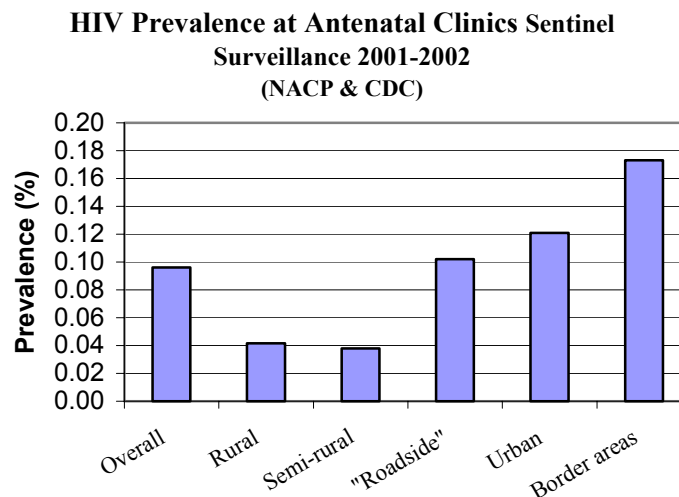
The situation analysis by the Ministry of Health Tanzania/National AIDS Control Program, the Tanzania Commission for AIDS (TACAIDS), and the Zanzibar AIDS Commission (ZAC) provide a sound picture of the current status of the HIV/AIDS epidemic in Tanzania. The assessment team witnessed the dramatic impact of HIV/AIDS and its adverse consequences on the health care delivery systems. The team offers additional insights on the current status of the HIV epidemic and key factors associated with HIV transmission in the general population.

## 1.1 Typology of the HIV/AIDS Epidemic

### 1.1.1 Tanzania Mainland

According to a limited set of seroprevalence surveys,<sup>1</sup> the Tanzania mainland faces a serious generalized HIV/AIDS epidemic according to the UNAIDS/USAID classification: “HIV is firmly established in the general population [more than 5%–20% of pregnant women infected]. Although populations with high-risk behaviors continue to contribute disproportionately to the spread of HIV, sexual networking in the general population is sufficient to sustain an epidemic, independent of populations with high risk behaviors.” Figure 1 tells the basic story: HIV is firmly established in both urban and rural areas. High transmission areas, including trading centers, border towns, and transport routes, are contributing disproportionately to fueling the HIV epidemic.

Figure 1



The rapid development of the market economy is a key factor behind the emergence and development of trading centers and main transportation stops. A critical mass of mobile

<sup>1</sup> National AIDS Control Programme. September 2002.

populations, including internal and external migrants, takes advantage of these new market opportunities. As documented by the National HIV and Syphilis Sentinel Surveillance, transactional sex is a frequent event in these locations where both organized and informal sex work expose individuals to acquiring HIV. The rapid development of the market economy is a key factor behind the emergence and development of trading centers and main transportation stops.

The prevalence of HIV among female sex workers is high according to data from several surveys. One study of adults aged 15–54 years in communities neighboring the gold mines in northern Tanzania found that 42 percent of female food and recreation workers were HIV-positive. Another study of female bar and hotel workers in northern Tanzania found 26.3 percent to be HIV-positive. A survey of female barmaids and other bar workers between the ages of 18 and 35 in the Mbeya Region identified an HIV seroprevalence rate of approximately 68 percent.<sup>2</sup>

The sector assessment team was unable to find HIV prevalence data among other migrant populations such as seasonal agriculture workers, truck drivers, or businessmen and businesswomen working in the informal economy. HIV prevalence data among military, men who have sex with men, drug users, or other specific groups were either not available or anecdotal.

With respect to a possible decline of HIV prevalence in 2002 compared with previous years, it is the team's opinion that an overall set of consistent HIV prevalence and incidence data show that such a trend does not exist. Even the current national antenatal clinic sentinel site surveillance of HIV and syphilis may be too limited to confidently generalize HIV prevalence in the Tanzanian population at large.

The Mbeya Region is noteworthy. According to data from the Regional Medical Office for Mbeya, antenatal clinic sentinel surveillance has identified a decrease in HIV prevalence from 20.3 percent in 1994 and 1995 to 11.0 percent in 2001, including a decrease among 15- to 24-year-olds, from 20.6 percent to 11.7 percent. However, according to the National AIDS Control Program, the HIV seroprevalence rate among antenatal attendees for 2001–2002 was 16.0 percent, including a rate of 13.4 percent among those aged 15–24 years. The planned National HIV Survey (2003/04) coupled with a behavioral survey may well provide a more accurate view of the HIV prevalence and behavioral responses to date.

### *1.1.2. Zanzibar*

According to a June 2003 study completed by the Ministry of Health and Social Welfare with participation and support by the World Health Organization, United Nations Development Programme, United Nations Children's Fund, and the Muhimbili University College of Health Sciences, the HIV prevalence is estimated at 0.6 percent for the general population. Accordingly, the epidemic in Zanzibar is still categorized as low or concentrated.

---

<sup>2</sup> Personal communication with representatives of the University of Munich Medical Research Project, Mbeya.

## 1.2 Adolescents, Out-of-School Youth, and HIV/AIDS in Tanzania

According to the YouthNet Program Assessment, “In 2000 adolescents made up 30% of the Tanzania population but accounted for 60% of the new HIV infections, with girls being five times more vulnerable than boys.”<sup>3</sup> Out-of-school youth represent a serious problem considering that only 21.7 percent of those who complete primary education proceed to the secondary level. Every year more than one million graduates from primary school are forced to start early independent life without proper skills in a context of widespread poverty and lack of economic opportunities.

## 1.3 Demographic Impact

The dramatic impact of AIDS on mortality is well documented in Tanzania. According to the 1999 Health Statistics Abstract, among the population aged 5 years and older, the major causes of death were malaria (22 percent), clinical AIDS (17 percent), tuberculosis (9 percent), pneumonia (6.5 percent), and anemia (5.5 percent). The Ministry of Health Adult Morbidity and Mortality Project provides an important tool for monitoring HIV/AIDS mortality at community levels. The system is now operational in seven sentinel districts and has documented that HIV/AIDS is the leading cause of death in selected sentinel rural and urban areas. Although the 2002 Tanzania census does not indicate an overall decrease in population growth rate compared with the population census of 1988, it may be worth investigating the factors behind the significant decrease of the population growth in certain regions, including Iringa, Lindi, Mbeya, Rukwa, and Ruvuma. Migration may explain part of the decline, however, these regions account for a relatively high AIDS case rate. Migration to Dar es Salaam may also mask the demographic impact of AIDS in this large city, which also accounts for the highest AIDS case rate in 2001 (112.1/100,000) after Mbeya (156.1/100,000).

## 1.4 HIV/AIDS and Other Sectors

Unfortunately, the specific HIV/AIDS socioeconomic impact and relations to selected key sectors such as education, agriculture, and natural resources are not yet documented. The World Bank estimates a reduction of average real GDP growth rate in the period 1985–2010 from 3.9 percent without AIDS to between 2.8 percent and 3.3 percent with AIDS.<sup>4</sup> The assessment team believes that development of the market economy, rural roads, and improved movement of goods and rural and urban populations may play an important role in the transmission of HIV. It is important and urgent to develop mechanisms to monitor the effects of HIV/AIDS on key socioeconomic sectors of Tanzania in order to improve advocacy and mobilization of these key sectors in the fight against HIV/AIDS.

<sup>3</sup> Schueller, J. et al. January 2003.

<sup>4</sup> Tanzania Commission for AIDS. January 2003.

## 1.5 Poverty Profile in Tanzania and HIV/AIDS

The Household Budget Survey 2000-01 provides at least three important insights relevant to HIV/AIDS:

- Regions with a lower level of poverty, such as Dar es Salam and Mbeya, account for the highest HIV prevalence rates.
- The mean expenditure per capita for alcoholic drinks accounts for approximately 20 percent (217 Tanzania shillings [Tsh]) of total expenditures, a little bit lower than expenditures for health (232 Tsh) and education (227 Tsh). The role of alcohol in increasing vulnerability to HIV infection may be worth investigating.
- Households with many members and large numbers of dependents are particularly likely to be poor. Should critical members of these families become affected by HIV/AIDS and unable to continue to work, this situation would lead to increased poverty and a dramatic influx of orphans into already stretched communities. Keeping key family members of large households alive and productive is critical to mitigating the adverse consequences of HIV/AIDS.

## 1.6 Other Determinants of the HIV/AIDS Epidemic

According to a review conducted by the National AIDS Control Program in collaboration with the MEASURE project, “male circumcision is a customary practice among Muslims and a large number of ethnic groups in Tanzania. A study in Mwanza region found modest protective effect against HIV infection, which was somewhat stronger in places with higher transmission.”<sup>5</sup>

The relationship of sexually transmitted infections to HIV/AIDS dynamics is well documented in Tanzania, particularly since the landmark Mwanza study (see especially Chapter 4).

The safety of blood transfusion is reported to be adequate. The assessment team could not find any studies that have investigated the routine enforcement of infection prevention practices, nor could the team find any data on injecting drug use, although this practice was reported to exist both in mainland Tanzania and on Zanzibar. Fortunately, the health sector HIV/AIDS strategy for Tanzania has included the implementation of universal precautions in health care settings to prevent nosocomial transmission of HIV among its 12 strategic objectives.

---

<sup>5</sup> National Bureau of Statistics. 2000.



## 2. Leadership Assessment

The Government of Tanzania has recently improved its commitment to fighting HIV/AIDS. The president of Tanzania declared HIV/AIDS a national disaster, and the Ministry of Health, the Tanzania Commission for AIDS (TACAIDS), and the Zanzibar AIDS Commission (ZAC) (the latter two were established in 2001–02), are devoting increased efforts to intensify the national response. A recent assessment of the policy environment for HIV/AIDS in Tanzania,<sup>6</sup> conducted by the POLICY Project recently, confirms that most stakeholders working in HIV/AIDS have appreciated the importance of the recent initiatives taken by the Government of Tanzania.

TACAIDS and ZAC face tremendous challenges for leading and coordinating a multisector approach to fighting the serious HIV/AIDS epidemic. The assessment team could not detect any sense of emergency commensurate with the disastrous HIV/AIDS epidemic; it seemed business as usual. It is important to note that the current approach to leadership development follows a central and hierarchical conceptual model that does not empower communities and decentralized structures and partners who are responsible for implementation. Much of the government's attention is focused on reinforcing systems and processes at the national level: building the capacity of TACAIDS; streamlining relations among the National AIDS Control Program (NACP) and the President's Office on Regional and Local Government; and developing plans to strengthen the NACP. Accordingly, most of the financial resources spent on HIV are channeled through coordinating bodies such as TACAIDS and NACP (52 percent of the funding for HIV/AIDS in 2001).<sup>7</sup> At the same time, voluntary counseling and testing interventions and implementing structures such as districts/local government accounted for 22 percent of the funds expended on HIV/AIDS in 2001. The national level devotes much effort to raising additional resources despite a low absorptive capacity and a limited track record in directing funding at public and private structures and organizations with demonstrated track records.

The plan to foster a multisector approach by channeling significant resources from the Tanzania Multisectoral AIDS Project to ministries and expecting those ministries to lead the fight in their respective sectors may be overly optimistic. The lesson from the health sector is quite instructive in this regard. Despite a large investment in HIV/AIDS funding, mainstreaming of HIV/AIDS has been limited, and knowledge and attitudes of health workers about HIV/AIDS remains inadequate.

Tanzania is known for several effective community trials, a large-scale regional intervention (in Mbeya), as well as several innovative small-scale interventions, yet there are few plans for expanding these excellent interventions. Lessons from HIV/AIDS programs in sub-Saharan Africa show that it is as necessary to support "champion" interventions as it is to enlist national leaders in the fight against HIV/AIDS. It is essential to develop existing local leadership and to support the decentralization of power to districts, civil society, and

---

<sup>6</sup> Ndugulile, F. November 2002.

<sup>7</sup> Directorate of Policy and Planning. January 2003.

communities in order to circumvent the dilatory response of government and national agencies to emergency situations. Due to the lack of appropriate knowledge, HIV/AIDS is also generally not perceived as a priority at the district and community levels; local councils do not earmark more than 5 percent of their combined health budgets for HIV/AIDS. This reality further speaks to the need to work at the more decentralized levels of governance to implement an appropriate response to the epidemic.

USAID/Tanzania should assist Tanzania to implement the principles of shared leadership in the fight against HIV/AIDS. The team concluded that USAID should endeavor to strengthen and expand local leadership at the district and community levels while continuing to support TACAIDS and ZAC efforts in advocacy, implementation, monitoring, and evaluation of the national responses. Current funding and technical support mechanisms for building the voluntary sector and developing public-private partnership are an important step toward engaging the participation of local leadership in the fight against HIV/AIDS. These mechanisms should be increased and modified to incorporate a dedicated component that will improve the implementation capacity of districts.

### 3. HIV/AIDS Prevention Programs

#### 3.1 Introduction

Despite millions of dollars of investment in prevention initiatives in Tanzania since the 1980s, the national HIV prevalence remains high and there are indications that prevalence is increasing to disastrous levels among specific segments of the general population. While many infections have been and are being averted by the existing mix of prevention programs, significant improvements must be made to Tanzania's prevention strategy if the country is going to rapidly reduce the incidence of HIV infections and the many adverse health and socioeconomic effects of AIDS.

Various official documents address the Government of Tanzania's approaches to prevention. The two most relevant and cogent the assessment team reviewed were the *National Multi-Sector Strategic Framework on HIV/AIDS (2003–2007)*, published by the Tanzania Commission for AIDS (TACAIDS) in January 2003, and the *Health Sector HIV/AIDS Strategy for Tanzania*, published by the Ministry of Health in February 2003.

Both documents list a range of interventions that can contribute to an effective national prevention program. For example, the TACAIDS framework includes nine specific “frame strategies” designed to “guide the various stakeholders in the National Response against HIV/AIDS in their planning and implementation of programmes, projects and interventions.” These are: 1) sexually transmitted infection control and case management; 2) condom promotion and distribution; 3) voluntary counseling and testing; 4) prevention of mother-to-child transmission; 5) primary and secondary school-based interventions; 6) health promotion for specific population groups (e.g., women, men, and youth); 7) health promotion for vulnerable groups (e.g., sex workers, men who have sex with men, and prisoners); 8) workplace interventions; and 9) universal precautions in health care and non-health care settings.

The *USAID Tanzania AIDS Strategy: 2003–2005* includes six prevention approaches—behavior change communication, voluntary counseling and testing, increasing access to condoms, prevention of mother-to-child transmission, AIDS prevention for youth, and blood safety—that are clearly compatible with the TACAIDS and Ministry of Health approaches.

In developing its new ten-year HIV/AIDS strategy for Tanzania, USAID will benefit from developing a separate strategic objective for HIV/AIDS. In fact, given the importance of reducing HIV prevalence in Tanzania by 2008, USAID should ensure that the intermediate result on prevention is as prominent and substantive as possible within this new strategic objective, particularly in light of the anticipated emphasis on treatment in the years ahead. With a strong intermediate response for prevention, USAID will be much better positioned to identify and support tactical interventions that build on its comparative advantage and contribute to an integrated and expanded response in Tanzania.

Even with a separate strategic objective for HIV/AIDS, USAID would be well advised to address another critical strategic issue in its ten-year plan. HIV/AIDS has reached crisis proportions in several regions, sectors, and population groups in Tanzania, and there is an urgent need to address these crisis areas. At the same time, many changes and improvements required to sustain Tanzania's response to the epidemic cannot be fast-tracked and should not be addressed in crisis mode. Consequently, USAID should consider ways to simultaneously pursue its strategies on both a short-term and long-term basis.

### 3.2 Current Prevention Situation: Key Findings

Based on in-country meetings, field visits, and document reviews, the assessment team concluded that the overall HIV/AIDS prevention effort in Tanzania appears to be weak and fragmented. The bulk of the country's institutional infrastructure—much of which could be making significant contributions to the response to the epidemic—has a limited ability to manage the task due to a wide range of constraints, including knowledge gaps, human resources, commodity shortages, financial resources, and management capacity. In addition, although government, civil society organizations, and the private sector are implementing a number of excellent prevention initiatives, these tend to be small, their coverage is limited, and their efforts are generally not coordinated.

Clearly, one of Tanzania's most important prevention initiatives is its condom distribution program. Approximately half of Tanzania's condoms are supplied free of charge through government-sponsored programs with the socially marketed Salama condom (funded by RNE and USAID) accounting for the other half. (Various other brands of condoms, including international brands and socially marketed brands leaking into Tanzania from neighboring countries, represent a small percentage of the overall condom market in Tanzania.) Although the number of condoms distributed in Tanzania has grown in recent years, including a 20 percent increase in Salama sales between 2001 and 2002 with an additional 25 percent increase likely for 2003, there is still a significant opportunity to increase their distribution even further. Parallel with the opportunity to increase the number of condoms *distributed* is an opportunity to substantially increase the numbers of condoms *used* by reducing the myths and eliminating the stigma associated with the product.

The high-quality voluntary counseling and testing services provided by the ANGAZA centers, which are operated by the African Medical Research Foundation, are a good example of the issue of coverage. Because each center in the existing network of ANGAZA centers operates under the same systems and processes, the quality of service delivery is consistent across the network from week to week, which is particularly important in building trust among prospective and existing clients. However, because there are only a few ANGAZA locations, the coverage is limited. While other voluntary counseling and testing options exist in Tanzania that extend beyond the reach of the ANGAZA network, few of them measure up to ANGAZA's quality standards, which reflects negatively on voluntary counseling and testing as a whole. In addition, ANGAZA has not yet added post-test activities for its clients and this is a critical gap in the direct services it provides; a gap that contributes to the weak and fragmented nature of Tanzania's response.

*Femina*, the quarterly magazine targeted at young women, is another example of a first-rate initiative that could have a far greater impact in Tanzania if its reach were broader and if it were better coordinated with and leveraged by other prevention initiatives. In terms of reach, the *Femina* print run of 70,000–80,000 copies per quarter is low, even with pass-along circulation. The quarterly nature of the publication diminishes its value to potential advertisers and sponsors as a marketing and communications vehicle. It is likely that the incremental cost of producing two additional issues per year and printing more copies could be recouped by additional advertising/sponsorship revenue and lower per-unit printing costs. In terms of coordination and leverage, one positive example is the consistent and prominent advertising in *Femina* by Salama, the socially marketed condom in Tanzania. However, these advertisements are basically the extent of the collaboration between these two important multi-donor-funded initiatives despite there being many ways they can and should be collaborating, including cross-promotions and product sampling.

Despite awareness levels of HIV/AIDS of nearly 100 percent, the lack of substantive knowledge on the issue is a serious problem in Tanzania. Surprisingly, this lack of knowledge cuts across Tanzanian society; for example, health care professionals and government leaders are, in many cases, as poorly informed as community members in a rural village. Obviously, different populations need access to different information about HIV/AIDS, but it is clear that no population group has enough knowledge. As a result, meaningful and sustained behavior change is proving to be an elusive goal.

Fortunately, people as diverse as regional medical officers, private doctors, voluntary counseling and testing personnel, and senior managers in the private sector openly admit the limits of their HIV/AIDS knowledge. In fact, there is a general desire among many people directly and indirectly involved in the response to improve their knowledge, which is a significant opportunity that should be exploited as quickly as possible.

Due in large part to the lack of knowledge about HIV/AIDS, stigma is rampant in Tanzania and it is having a substantial negative effect on the country's response to the epidemic. A study on stigma and discrimination performed by Muhimbili Hospital in collaboration with the International Center for Research on Women found that people living with HIV/AIDS accept stigma and discrimination as being normal and even justified. According to one report from the National AIDS Control Program regarding stigma and discrimination, "Many of our interventions are not succeeding because even the services we are trying to put up are not being utilized because of stigma." Although efforts to address stigma are being stepped up, the problem is so pervasive that it will take a substantially larger effort than what is being planned to reduce stigma to levels at which other HIV/AIDS interventions from across the prevention-care-support-treatment continuum can be truly effective.

Even though the HIV prevalence rate on Zanzibar is considerably lower than it is on the mainland, stigma appears to be equally high and little is being done to reduce it. Rather than wait until there is an increase in the prevalence rate, steps should be taken in the short term to improve the HIV/AIDS knowledge of Zanzibar's population and to reduce stigma.

The current HIV/AIDS response in Tanzania does not appear to be targeting prevention interventions to specific populations most at risk for infection. (The exception is prevention of mother-to-child transmission, which by its nature is an extremely targeted intervention.) At-risk populations such as sex workers, truck drivers, fishermen, men who have sex with men, soldiers, and prisoners have little or no access to prevention programs in general, much less to programs that are designed to address their unique circumstances. Historically, initiatives have targeted at-risk populations in Tanzania—one targeted at truck drivers and related populations in high-transmission areas was previously funded by USAID—but these types of programs have largely disappeared.

Youth as a demographic group are being targeted by a number of prevention programs. Given the low levels of knowledge about sex, reproductive health, sexually transmitted infections, and HIV/AIDS among this population, as well as their risk behaviors (e.g., relatively early sexual debut and low condom use), it is extremely important and appropriate to focus on young people. However, youth are largely treated as a homogeneous group in terms of prevention programs when, in reality, youth are a highly diverse group that should be segmented to best meet different needs. (Some youth programs in Tanzania such as *Femina* do specifically focus on girls; however, given their disproportionate vulnerability to HIV infection, this population is largely underserved.)

An especially serious problem with existing youth-focused HIV/AIDS interventions in Tanzania is that a structured program for primary and secondary in-school activities does not exist. However, the Ministry of Education and Culture recently developed a draft HIV/AIDS strategic plan<sup>8</sup> to contribute to the fight against HIV/AIDS. The Ministry of Education and Culture will be able to build on several ongoing in-school demonstration projects such as the Mema Kwa Vijana and TANESA peer education program in Mwanza Region, and the vibrant in-school interventions conducted by Student Partnership Worldwide in Iringa Region.

While in-school programs are often controversial, most countries have realized their value in preventing the spread of HIV among young people and have developed mechanisms to reach young people in the classroom with a full range of prevention messages, including delay in sexual debut and issues of cross-generational sex. That Tanzania is essentially missing this opportunity is a major deficiency in its response to the epidemic.

In addition, the availability of youth-friendly services (e.g., diagnosis and treatment for sexually transmitted infections, voluntary counseling and testing, and post-test clubs) is limited. While Tanzania is doing some interesting work on providing accessible, good-quality voluntary counseling and testing services in government health facilities, little has been done to ensure that young people will use these services.

Poor or nonexistent targeting of prevention initiatives is part of a larger problem with prioritizing HIV/AIDS activities in Tanzania. Within the prevention arena, there appears to be little discussion about priorities. For example, there is a growing interest in prevention of mother-to-child transmission—accompanied by a rapidly swelling pool of funds to support these interventions—but there is little or no discussion about how prevention of mother-to-

---

<sup>8</sup> Ministry of Education and Culture. August 2003.

child transmission relates to other prevention activities. There is a similar groundswell of interest and support for massive expansion of voluntary counseling and testing without much discussion regarding its integration into the continuum of prevention activities that promote and sustain behavior change. (It is particularly worrisome that voluntary counseling and testing programs are being launched across Tanzania without adequate post-test support for people who test positive as well as those who test negative. International experience clearly indicates that post-test support is an important part of prevention for people who test, regardless of their serological status.)

Inadequate human resources—both in terms of numbers and capacity—are also an issue in Tanzania. The expansion of critical prevention initiatives is already being stymied by human resource limitations; the shortage of qualified counselors for voluntary counseling and testing services is the most striking example of this problem. Human resource limitations will grow progressively worse as the response is scaled up in the coming years, particularly in the health sector and as it concerns management of nongovernmental and community-based organizations. In fact, without an immediate commitment to expand the pool of qualified individuals over the short and long terms, it is likely that any attempt to scale up prevention in Tanzania will struggle to succeed.

In the short term it appears that the shortage of trained staff could be partially filled by people who have been laid off during recent cutbacks in the health sector. However, there is some disagreement among senior people in the health sector about the numbers and qualifications of the pool of unemployed or underemployed health workers in Tanzania.

The shortcomings in human resources are indicative of a larger, systemic problem with institutional capacity in Tanzania. Unfortunately, a long list of factors contributes to this problem, including inadequate management and operations systems, infrastructure limitations (ranging from facilities to information technologies to laboratory services to transportation), insufficient capacity to gather and analyze data, financial accountability, strategic and tactical planning, and monitoring and evaluation. Discussions with a wide range of informed individuals, including senior staff from government agencies, multilateral organizations, bilateral donors, international and local nongovernmental organizations (NGOs), and the private sector confirmed the deficiencies in institutional capacity in Tanzania.

In addition, not enough local NGOs are equipped to contribute substantively to Tanzania's response to the epidemic and not enough resources have been dedicated to increasing the number and capacity of these organizations. There are some outstanding local NGOs in Tanzania such as TANESA (Tanzania Essential Strategies Against AIDS) in Mwanza; TANESA has had access to the financial resources and technical assistance required to play an important role in the response. However, even with sustained donor funding and technical assistance, TANESA has until recently operated in only one district.

Commodities used in HIV/AIDS prevention, including condoms and drugs to treat sexually transmitted infections for use by the public, as well as latex gloves and disposable needles for use in the health sector, are often not available in sufficient quantities when and where they are needed. Product availability varies by product type; for example, condoms are generally

less available in rural areas, whereas examination gloves are in short supply in public health care facilities in urban and rural areas. Given the critical role that these commodities play in preventing the spread of HIV, reducing or eliminating shortages—as well as expanding the availability of these products in more remote areas—should be a much higher priority than it appears to be.

It is worth noting that one apparent result of cost-sharing in some health care facilities is the requirement that pregnant women bring many of their own supplies, including latex gloves, to the facility for use during delivery. When combined with a tradition of home birthing in Tanzania and women's concerns about the quality of delivery services in health care facilities, this is yet another disincentive for delivering in these facilities; a situation that could have a dramatic effect on the uptake of prevention of mother-to-child transmission services in Tanzania.

There is evidence that individual companies in the private sector are increasingly aware of their responsibilities in the response to the epidemic. To date, it appears that the bulk of their efforts are either related directly to their workforce or to raising public awareness about HIV/AIDS. A small number of examples—the initiative undertaken by the Geita Gold Mine as part of the African Medical Research Foundation's Mine Health Project—offer greater integration of workplace and community-based activities.

Larger companies, including both multinationals and domestic enterprises, are cognizant of the need and value to provide adequate health care for their employees, which can include the provision of antiretroviral drugs. However, workplace policies on HIV/AIDS tend to be more ad hoc than institutionalized, but there appears to be a slow shift toward more structured approaches.

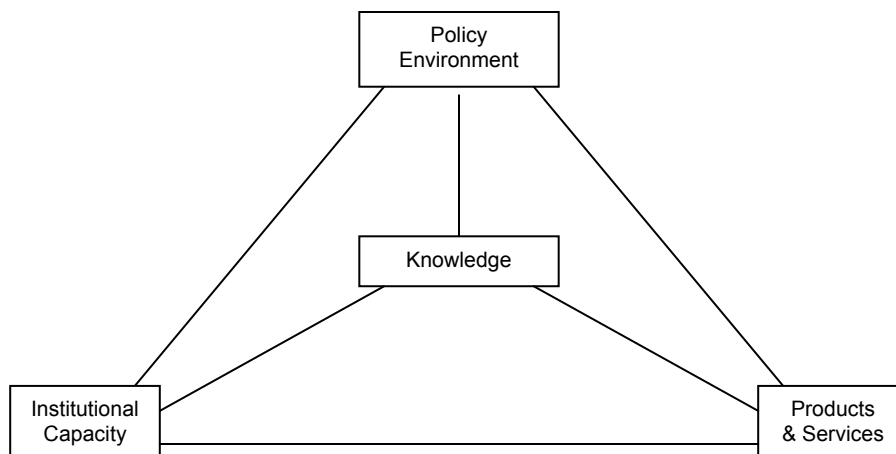
Companies as diverse as Twiga Cement, Vodacom, and ITV have invested heavily in HIV/AIDS public awareness campaigns. Although these efforts do make a positive contribution to Tanzania's response, they would be measurably more effective if their efforts were actively coordinated and the efficacy of their messages was monitored.

In general, prevention appears to be losing ground in Tanzania. At a time when more funds should be directed to core activities such as condom promotion and stigma reduction, it appears that there will be less funding available for these activities in the future. Strategically, it appears that the fundamental lesson about the cost-effectiveness of averting infections is being lost in the rush to expand care, support, and treatment programs.

### **3.3 Prevention Strategy Map**

The purpose of this section is to describe a strategy (Figure 2) that was used by the assessment team as a framework to help it identify programming areas in which USAID could most effectively contribute to strengthening Tanzania's response to the epidemic. The figure has four strategic themes, each of which is linked directly to the others. The strategic themes are knowledge, institutional capacity, products and services, and policy environment.



**Figure 2**

### 3.3.1 Knowledge

Despite extraordinarily high levels of awareness of HIV/AIDS among the general population, there is a glaring lack of substantive knowledge. This lack of knowledge—coupled with misunderstandings and misinformation—is severely impairing Tanzania’s response to the epidemic.

The across-the-board knowledge gap has a widespread effect on prevention efforts in Tanzania. For example, stigma and discrimination thrive in Tanzania in large part because of a lack of real knowledge about the disease. The scarcity of behavioral surveillance data is a significant impediment to effective planning, particularly for interventions targeting the most vulnerable groups. Behavior change communication programs are under pressure to move beyond promotion of condoms and to elaborate these messages by exploring the broader implications and related actions required to make them more than an easily remembered slogan. Counselors want to know more to improve the quality of their psycho-social support for specific populations such as pregnant women, discordant couples, and young people. Clinicians are even admitting their ignorance of many issues related to the disease. Political leaders are acknowledging their need for more information about HIV/AIDS to answer questions from their constituents. And the lack of an effective sexual health and life skills curriculum in public schools ensures that the next generation of Tanzanians will not be adequately prepared to confront the many challenges of HIV/AIDS.

On the strategy figure, knowledge is intentionally placed at the center because of its overwhelming strategic importance to every prevention activity outlined in key documents on Tanzania’s response, including the strategic frameworks published by TACAIDS and the National AIDS Control Program.

### 3.3.2 *Institutional Capacity*

Tanzania does not currently have the institutional capacity required to effectively respond to HIV/AIDS. Strengthening that capacity is critical to both the short-term and long-term responses to the epidemic. Although investments have been made over the years to strengthen the capacity of individual institutions in Tanzania, the problem is systemic, which is precisely why institutional capacity must be a core strategy.

Literally every aspect of institutional capacity in Tanzania needs attention, with human resources and management systems at the top of a list that ranges from coordination mechanisms to infrastructure and information technologies. Regardless of the sector or the type of organization, substantial improvements in institutional capacity are a prerequisite for a sustained and successful response to the epidemic.

### 3.3.3 *Policy Environment*

The policy environment appears to be changing in Tanzania with increasing awareness of the effects of policy on the response. However, if Tanzania wants to improve the overall effectiveness of its response, it will need to be far more proactive about creating a broadly enabling policy environment. Policy development, which appears to be the strongest component of the current policy environment, must be accompanied by effective policy implementation and enforcement at all levels of government, civil society, and the private sector. In fact, the need for effective, well-implemented, and enforced policies is a crosscutting issue that affects the HIV/AIDS response in ways as diverse as workplace initiatives, postexposure prophylaxis,<sup>9</sup> prevention of mother-to-child transmission protocols, school curriculums, gender equity, and resource allocation.

### 3.3.4 *Products and Services*

The sustained success of prevention programs depends on access to various products (for example, condoms, gloves, and disposable needles) and services (for example, clinics for screening and treating sexually transmitted infections and voluntary counseling and testing centers). While most of these products and services are available in Tanzania, access to them has numerous associated problems which collectively have a negative effect on Tanzania's overall response. There are product shortages due to supply and distribution problems, e.g., condom availability in rural areas. In addition, there are recurring quality issues that further complicate the situation; for example, public perception about the quality of the free "government condom" appears to limit its use in Tanzania.

There are serious and ongoing issues of service quality, consistency, and coverage. Even with vastly improved HIV/AIDS knowledge among Tanzanians, problems accessing related products and services dramatically limit their ability to reduce their risk of infection.

---

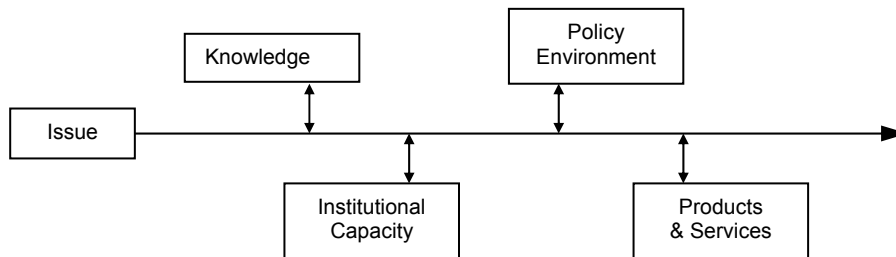
<sup>9</sup> Postexposure prophylaxis is an example of how important policies are not effective unless they are fully implemented and enforced. Tanzania has a postexposure prophylaxis policy for health care workers, but health care managers and staff have little or no knowledge of the policy. In addition, the specific guidelines and supplies required to implement the policy, including drug supplies and HIV testing requirements, are not in place in health care institutions.

Using the strategy figure as a guide, it is possible to identify areas in which USAID brings a comparative advantage to the response within each thematic area and to determine how that comparative advantage relates to other elements of Tanzania's overall response, including initiatives by government, multilateral and other donors, and NGOs. USAID's longstanding comparative advantage in training is particularly applicable in improving institutional capacity; for example, an initiative to strengthen the ability of Tanzania's zonal training centers to deliver relevant courses on HIV/AIDS would broadly benefit its response. Similarly, USAID's comparative advantage in logistics could be further leveraged to improve the procurement and distribution of all essential products used in the response. USAID's long-time partnership with the Royal Netherlands Embassy to support social marketing could also be leveraged for a number of different initiatives, ranging from expanded marketing of condoms, to the marketing of ideas and information important to reducing stigma and discrimination.

### 3.4 Identifying Strategic Priorities

Redrawing the strategy figure as a simple network figure (Figure 3) helps to illustrate how different issues can be channeled to analyze them and identify strategic priorities. Section 3.5 discusses a series of issues that were preliminarily evaluated via the strategy figure and identified as possible strategic priorities for USAID/Tanzania.

**Figure 3**



In using the figure to analyze issues, it is valuable to use key criteria to chart the implications within *each* strategic area. The following criteria were used during this process: 1) the existing situation (ranging from the current situation in Tanzania to USAID funding requirements/priorities); 2) impact on prevention goals (for example, a reduction in the prevalence rate); 3) USAID's comparative advantage; 4) existing or planned commitments by other institutions; 5) cost-effectiveness; and 6) potential problems and corresponding solutions.

### 3.5 Strategic Priorities

The assessment team has identified eight prevention issues, which—within the integrated context of the four component parts of the strategy map—should be considered core strategic priorities over the next ten years. Given the relatively short time that the team had to assess the situation in Tanzania, this list is not exhaustive and it is likely that people with additional knowledge of HIV/AIDS in Tanzania would identify additional or different priorities. The core strategic priorities are these:

- Health workers
- At-risk populations
- Nongovernmental organizations
- Private sector
- Financing mechanisms
- Social marketing
- Prevention of mother-to-child transmission
- Voluntary counseling and testing.

#### 3.5.1 Health Workers

Given the frontline role that health workers play in managing the HIV/AIDS epidemic, equipping these workers with the knowledge, skills, and tools required to handle this responsibility should be a priority in Tanzania. The situation is so critical that there is a widespread belief within the country's health care system that health workers themselves are a main cause of HIV/AIDS-related stigma. Mobilizing the various resources—adequate numbers of trained/sensitized staff (including recognition of counselors as a vital cadre within the health service), pre-service and in-service training networks, management systems, essential supplies (gloves, disposable needles and drugs for postexposure prophylaxis), prevention protocols (safe blood supply, needle use, and general infection prevention)—is a major initiative with short-term and long-term needs and implications. Essentially, addressing this issue requires a long-term commitment to systemic change, but there is a need to act quickly to improve the situation in order to: 1) reduce the stigma of HIV/AIDS, which has a direct impact on quality of care; and 2) eliminate any possible HIV infections caused by poor infection prevention practices.

#### 3.5.2 At-Risk Populations

Although Tanzania has a generalized epidemic, extremely high prevalence rates among key at-risk populations strongly support the importance of substantially increasing the number and quality of interventions targeted at these groups.<sup>10</sup> In addition to the more traditional at-risk profiles, youth—disaggregated by various risk criteria (e.g., young women driven to formal or

---

<sup>10</sup> Quality data on key at-risk populations, including sex workers, truck drivers, fishermen, miners, migrant workers, men who have sex with men, prisoners, and uniformed services (i.e., police and military), are generally not available in Tanzania. In addition, data on key risk behaviors (e.g., injecting drug use and high-risk sexual behavior) are equally limited. However, the available quantitative and qualitative data on both topics indicate that high-risk behavior among these populations is a significant factor in the spread of HIV.

informal sex work by economic conditions or out-of-school youth)—should also be considered key at-risk populations. Over the immediate short term, it is critical to gain a better understanding of the range of at-risk populations, including where they are located in Tanzania and the behaviors and circumstances that lead to their greater vulnerability to HIV/AIDS. Over the medium and long terms, essential services (i.e., behavior change communication, voluntary counseling and testing, sexually transmitted infection diagnosis and treatment, drop-in centers, and access to condoms) should be made readily available to these populations.

### ***3.5.3 Nongovernmental Organizations***

Assuming prevention efforts in Tanzania will be expanded over the next twenty years, the NGO sector will have increasing responsibility for managing interventions. Although the international NGOs in Tanzania have reasonably good capacity, the local NGO sector is woefully unprepared to manage any increase in responsibility. International NGOs tend to have easier and better access to resources and international staff, which has a significant effect on their overall capacity. Local NGOs have a minimal general capacity, with management expertise being particularly scarce. The depth of management expertise in any given organization is a specific issue; for example, an organization may have a good executive director, but there is often a significant gap in the capacity of the senior manager and that of middle managers.

Given the interest that donor agencies have in working with local NGOs, it would be valuable to reassess the way that the capacity of local NGOs is strengthened. One short-term possibility is to focus on strengthening organizations that are already relatively stronger than other organizations, regardless of their current involvement with HIV/AIDS. The process of strengthening nascent organizations is simply too slow to make any significant short-term or medium-term difference in the response to the epidemic. Conversely, it would be much more efficient to strengthen the institutional capacity and provide the necessary training in HIV/AIDS to more viable NGOs. In addition to classic strengthening initiatives such as training and technical assistance, it would be valuable to focus on improving management systems and addressing critical human resource issues such as compensation and career advancement, which are common reasons that qualified managers and staff often leave the sector.<sup>11</sup>

### ***3.5.4 Private Sector***

Given the gaps in the current response to HIV/AIDS in Tanzania, the private sector could play a larger role in HIV/AIDS prevention. Although the organized private sector is a relatively new phenomenon in Tanzania, it is growing rapidly with increasing domestic and international investments. In addition, the private sector typically has a more inherent grasp of

---

<sup>11</sup> NGOs managed by and for people living with HIV/AIDS will be increasingly important in Tanzania as more people learn their status or become sick. These organizations can play a vital role in prevention activities and, consequently, it would be valuable to have a specific initiative for the establishment and development of reputable organizations for persons living with HIV/AIDS. (The assessment team is mindful of the difficult politics surrounding the existing organizations for persons living with HIV/AIDS in Tanzania but believes it important to expand the number of these NGOs and not merely support the existing ones.)

many of the issues, e.g., management practices, service delivery, sales and marketing, communications, and logistics that are central to prevention programs. (Note that in the context of this strategic priority, the private sector is defined as for-profit companies, not specialized “social marketing” organizations.) The challenge will be to demonstrate to the decision-makers in reputable companies that playing a role in HIV/AIDS prevention is compatible with their business models and goals. Making the case to the private sector will not be easy, but the short-term and long-term benefits are so significant that the risks are far outweighed by the potential reward.

The private sector also has a parallel impact on the epidemic through its workplace policies. It appears that many companies—particularly, the larger multinationals and locally owned companies—have basic or initial HIV/AIDS workplace policies in place, including antiretroviral drug policies. There is a significant opportunity to provide technical assistance to companies across the sector on workplace policies, including scaled-up and ongoing prevention activities such as stigma reduction and condom distribution.

### ***3.5.5 Financing Mechanisms***

Tanzania has a serious problem with absorptive capacity, which will be exacerbated by the increasing flows of HIV/AIDS funds into the country over the next few years. Strategically, it will be crucial to develop funding mechanisms that ensure results and accountability across the board. The success of the Rapid Funding Envelope (RFE) is an excellent example of an approach that can and should be expanded, either in its present form or in other variations, to get funds into the hands of competent organizations. (Variations on the RFE could include mechanisms to channel funds for specific initiatives to government agencies or private sector organizations.) Without a strategic approach to funding mechanisms, it is likely that much of the increased funding in Tanzania will go toward “reinventing the wheel” as opposed to expanding and improving the country’s prevention activities.

### ***3.5.6 Social Marketing***

Even though social marketing has been widely used in developing countries to promote and sell products, services, and ideas related to HIV/AIDS, its overall effectiveness—albeit significant—has been limited. (Although social marketing has traditionally been focused on products and services, a wide range of ideas could be socially marketed, extending far beyond the stigma messages and the basic ABCs of HIV/AIDS prevention that are currently being promoted via social marketing. These include delayed sexual debut, cross-generational sex, and more evolved messages regarding abstinence and faithfulness.) Social marketing is a powerful tool that has the potential to transform a country’s response to the epidemic, particularly if it is used as part of a more integrated private sector approach to prevention as is proposed for Tanzania. In this case, the challenge is to reinvigorate the discipline of social marketing within the context of Tanzania so that it truly connects with target populations and makes a measurable contribution to prevention beyond year-over-year sales increases for the Salama condom. A strategic social marketing program should play a substantial and ongoing role in a receptive and thriving market for all of the products, services, and ideas that help prevent the spread of HIV/AIDS.

### ***3.5.7 Prevention of Mother-to-Child Transmission***

Although the overall effect of prevention of mother-to-child transmission (PMTCT) activities on Tanzania's prevalence rate would be low, it is a politically important issue for many different constituencies, not the least of which is USAID. Consequently, it must be considered a strategic priority. If a decision is made to expand the PMTCT program to include ongoing access to antiretroviral drugs for the mother and, possibly, the father, the program could have a broader impact on the epidemic; for example, fewer orphans and vulnerable children, more stable families, and a decreased threat to income and food security. However, the effect on the overall prevalence rate would still be limited. From a strategic perspective, the challenge/opportunity will be the development of a PMTCT infrastructure that can be leveraged by other prevention initiatives; for example, the training, protocols, supplies, etc. for health workers involved in PMTCT activities can easily be transferred to more mainstream prevention activities, including voluntary counseling and testing for other populations, sexually transmitted infection diagnosis and treatment, and general infection prevention.

### ***3.5.8 Voluntary Counseling and Testing***

Tanzania's third-round proposal to the Global Fund to Fight AIDS, Tuberculosis and Malaria is approved. If funded, resources will be available to dramatically expand voluntary counseling and testing (VCT) services; VCT would remain an important strategic priority for USAID but its role should be more focused on issues such as management systems, quality assurance, and monitoring and evaluation. If the Global Fund resources are not available, USAID should consider a broader role in VCT, building on its experience with the ANGAZA network to ensure better access to VCT services in Tanzania. It is important to note that targeted VCT services for at-risk populations constitute a particularly glaring deficiency in the Tanzanian response to HIV/AIDS and is a gap that USAID should consider filling as part of a larger strategic commitment to highly vulnerable people.

## 4. HIV/AIDS Care and Treatment Programs

### 4.1 Introduction

The scope of work for this evaluation included assessment of the capacity of the health system to respond to treatment needs for HIV/AIDS, including systems issues and human resource capacity development needs. This section of the report not only presents our findings, but also presents our major conclusions and recommendations for strategic directions.

The team did not explore two important areas. First, another team in Tanzania evaluated logistical issues related to antiretroviral drugs, including purchasing, procurement, storage, and distribution; our team, therefore, did not focus on these areas. The importance of these logistical issues, however, cannot be overemphasized. Second, the team did not formally evaluate the issue of home-based care, although we touch on this important aspect of the HIV care system in several of our recommendations. Home-based care has been evaluated in a recent consultation for USAID titled, *Overview of Community Home-Based Care Services for People Living with HIV/AIDS and Other Chronic Illnesses in Tanzania*,<sup>12</sup> which was prepared in December 2002. This review concluded that community home-based care represents a cost-effective way to reduce hospital burden, provide basic nursing service, maintain nutrition and hygiene standards, and meet the needs expressed by affected families to mitigate the physical, mental, spiritual, and socioeconomic difficulties they and people living with AIDS face.

In our recommendations for strategic directions, the team chose ten key issues related to the development of an HIV treatment program, including antiretroviral therapy, in Tanzania. For each key area we first summarize the current situation and then offer conclusions and recommendations. We believed it important to note and comment on an additional four issues, although we did not offer specific recommendations for them. All the fourteen issues we discuss below were recurrent themes, and we are confident in identifying them as important considerations for implementation of a successful HIV care program in Tanzania.

### 4.2 Current Situation

#### 4.2.1 HIV Disease and Co-morbidities

HIV continues to impose a heavy burden on the Tanzanian health care system. It is estimated that an HIV-positive adult will have about seventeen illness episodes before death, and that the health care costs can be twice the Tanzanian GDP per capita. An estimated 50 percent to 60 percent of hospital beds are occupied by patients with HIV/AIDS-related illness and, in some hospitals, this proportion may be even higher. For example, in a random survey of twenty male and female patients at one district hospital, about 75 percent were infected with HIV. In a survey of four consultant hospitals (Bugando Medical Centre, Muhimbili National Hospital, Mbeya Referral Hospital, and Kilimajaro Christian Medical Centre), during 1999 or

<sup>12</sup> U.S. Agency for International Development. December 2002.



2000, HIV/AIDS ranked among the five top causes of adult admissions. At Muhimbili National Hospital, Mbeya Referral Hospital, the private nonprofit Hindu Mandal Hospital, and Kilimajaro Christian Medical Centre, HIV/AIDS was the number-one cause of death in 1999. A recent USAID-supported consultation on home-based care concluded that the effect of diseases due to HIV/AIDS has been enormous and continues to grow on an already overburdened health care system. This report concluded that although the majority of people living with HIV do not know that they are infected, most need and seek treatment for opportunistic infections, including tuberculosis and other HIV related illnesses. Hospitals are becoming increasingly overcrowded, leading to reduced or poor quality of care for all patients. For example, a number of districts (e.g., Same and Kasulu) have constructed new wards to accommodate the increasing demand of HIV/AIDS-related admissions.

HIV does not exist in a vacuum, and any HIV treatment program must consider the effect of HIV on other diseases and vice versa. These issues are particularly relevant for tuberculosis. The number of tuberculosis cases has increased in Tanzania from 10,753 in 1979 to 54,312 in 2000, largely fueled by the AIDS epidemic. In 2002, more than 63,048 cases of tuberculosis were reported. In Kilimajaro, the number of tuberculosis cases increased by 4.1 times from 1990 to 2000. Nationwide, the number of cases is increasing by 5 percent to 10 percent per year, and it is estimated that approximately half of all patients with tuberculosis are also infected with HIV. The rate of HIV in patients with tuberculosis is highest in the 25–34 year age group. Tuberculosis is currently the leading cause of death among patients with AIDS, accounting for 30 percent of all deaths. In addition, personal interviews with medical personnel in Mbeya, Dar es Salaam, and elsewhere indicated that more patients with tuberculosis are presenting in atypical fashions, such as smear-negative pulmonary tuberculosis and extra pulmonary tuberculosis (including central nervous system disease); this is largely related to the HIV epidemic. Of all patients with tuberculosis in Tanzania during 2002, 34.8 percent were AFB-smear negative, and 19.8 percent represented extra pulmonary tuberculosis. The National Tuberculosis and Leprosy Control program has achieved a commendable treatment success rate of almost 80 percent. The HIV epidemic threatens this progress. At the same time, the tuberculosis program has much to offer as a successful model in planning a program for antiretroviral treatment in Tanzania, including (as discussed below) integration of local clinics and community health workers, a standardized treatment regimen, a good system of drug supply, and a simple standardized record keeping system.

HIV-infected patients may develop a variety of other opportunistic infections besides tuberculosis. Although the team did not identify specific data on the distribution of different diseases, interviews with medical personnel revealed that some of the most common complications were dermatologic, mucocutaneous, and acute respiratory illnesses. Dermatologic illnesses included fungal skin infections, seborrheic dermatitis, Kaposi sarcoma, and a common pruritic papular eruption. Mucocutaneous manifestations include oral, esophageal, and (in women) vaginal candidiasis. Respiratory illnesses include tuberculosis and bacterial pneumonia. Other opportunistic infections may involve the central nervous system (including cryptococcal meningitis, tuberculosis, and cerebral toxoplasmosis), and the gastrointestinal system (including chronic diarrhea due to intestinal parasites). Finally, patients with HIV infection may have a variety of constitutional signs and symptoms, including fever and weight loss. In many cases these may be due to opportunistic infections,

including those described above. The team found throughout the country that the very great majority of HIV-infected patients do not present to the health sector until they develop signs and symptoms of HIV disease. In most cases, such disease is fairly advanced, and if CD4+ lymphocyte count testing is performed, the levels of immunosuppression are found to be great.

These opportunistic infections may occur against a background of other common illnesses affecting the general Tanzanian population. Two that require specific mention are malaria and intestinally acquired infections. At one Mbeya clinic, from January through June 2003, malaria represented 605 (15 percent) of 4,071 outpatient visits among children under 5 years, and 439 (9 percent) of 4,629 outpatient visits among patients older than 5 years. Common intestinally acquired infections include typhoid (although some cases may be overdiagnosed), and intestinal parasites. Some of the most common intestinal parasites are strongyloides, hookworm, and ascariasis; others such as giardiasis and amebiasis are also prevalent. The team did not identify specific data on acute or chronic viral hepatitis, including hepatitis B or hepatitis C, but these infections are important to determine, especially if patients are HIV-positive.

Finally, sexually transmitted diseases continue to be a significant problem, especially in “high-transmitter” areas, including along highways where roads from other cities or countries meet. In one Mbeya clinic near such an area, during the first half of 2003, the clinic received 534 visits for genital discharge syndrome, 407 visits for genital ulcer diseases, and 295 visits for pelvic inflammatory disease. Although a syndromic approach is used for diagnosis and treatment, clinicians reported that they believed some of the most common specific sexually transmitted infections were gonorrhea, chancroid, and syphilis. Nationally, 211,291 sexually transmitted infections were reported in 2001, compared with 149,222 cases in 2000 and 39,385 in 1999; even accounting for underreporting, this trend is worrisome. Cases reported in 2001 included 90,058 episodes of genital discharge syndrome, 46,365 of genital ulcer disease, and 43,855 of pelvic inflammatory disease. Among women screened in antenatal clinics in 2001–2002, 8.2 percent had a positive serologic test for syphilis. Among women who were also positive for HIV, 12.4 percent had a positive test for syphilis. For women, rates were 11.4 percent among those from rural areas, 13.3 percent from semi urban areas, 5.1 percent from urban areas, 9.7 percent from roadside areas, and 13.4 percent from border areas.

#### ***4.2.2 Treatment Guidelines for Patients with HIV***

In April 2002, with the leadership of Professor P.K. Pallangyo, dean of the Faculty of Medicine at Muhimbili University College of Health Sciences, a workshop of approximately 70 health professionals from throughout Tanzania discussed the first draft of National Guidelines for the Clinical Management of HIV/AIDS. These guidelines were edited and finalized by a committee of nine Tanzanian experts, including representatives from the Muhimbili University College of Health Sciences, Muhimbili National Hospital, National AIDS Control Program, and World Health Organization. These national guidelines are sound. They provide recommendations in a number of key areas including protective measures/infection control, HIV and pregnancy, prevention of mother-to-child transmission,

pediatric HIV infection and disease, community and home-based care, HIV counseling and testing, management of common opportunistic infections, prophylactic treatment against tuberculosis and other opportunistic infections, use of antiretroviral drugs in HIV-infected women, and postexposure prophylaxis.

These guidelines highlight the important fact that development of a comprehensive program for care and treatment of HIV infection involves much more than just provision of antiretroviral drugs. However, key aspects of the program for antiretroviral therapy include the following: 1) baseline evaluation that includes basic laboratory tests such as serum transaminases and CD4+ lymphocyte counts; 2) initiation of antiretroviral therapy for symptomatic patients, and asymptomatic patients with CD4+ counts less than 200/mm<sup>3</sup>; 3) chemoprophylaxis with isoniazid and cotrimoxazole (after relevant opportunistic infections are treated); 4) initiation of therapy with a highly active antiretroviral therapy regimen such as zidovudine, lamivudine (3TC) and efavirenz; 5) use of multiple strategies to promote patient adherence; 6) guidelines for monitoring patients on antiretroviral therapy, including follow-up laboratory tests such as blood counts and liver function tests; and 7) guidelines related to change or interruption of therapy. The guidelines also include recommendations on management of HIV in children, including age-specific CD4+ counts for which therapy should be considered in asymptomatic children.

#### ***4.2.3 Current Situation with Antiretroviral Therapy***

HIV antiretroviral drugs can be purchased through the private sector and pharmacies. The team found that antiretroviral drugs are currently being prescribed in Tanzania. In addition to purchasing drugs from within the country, some patients are acquiring drugs from outside the country. Antiretroviral drugs are not routinely prescribed by the public sector, nor are they available through public sector health facilities. One common regimen used is a combination pill containing stavudine, lamivudine, and nevirapine. This combination is available for as low as \$27. Use of drugs such as nevirapine to prevent mother-to-child transmission is discussed elsewhere in this report.

The strong desire of patients to obtain antiretroviral medications in any way possible, given limited options, is entirely understandable. However, the current system by which such drugs are obtained and used has a number of drawbacks. Patients may have interruptions in drug therapy because of intermittent availability (including pharmacy shortages), not having enough money to consistently buy drugs, and other constraints. The team visited a pharmacy in Iringa in which only one HIV drug (nevirapine) was available. Taking either monotherapy or having interruptions in drug regimens increases the likelihood of developing HIV strains resistant to first-line antiretroviral drugs. One physician, Dr. Kaushik Ramaiya, at the non-profit hospital Shree Hindu Mandal Hospital in Dar es Saalam, performed HIV resistance studies on a small number of patients with virologic failure on their current regimens; he found drug resistance in such patients to be present, including resistance in some patients to more than one antiretroviral drug.

#### **4.2.4 Financial Support for HIV Therapy**

The team learned that it is Tanzania's overall policy to provide certain services and medications free of charge in the public sector to patients with AIDS. This applies only to those meeting the clinical definition of AIDS and not those with asymptomatic HIV infection or "minor" HIV-related signs and symptoms. In addition, this covers only treatment of opportunistic infections, and does not include antiretroviral drugs or laboratory tests such as CD4+ counts. Even with these limitations, the reality in Tanzania is that severe resource constraints limit what care and drugs can be provided to patients with AIDS. For example, drugs to treat tuberculosis seem available and accessible to most patients, even at the local level. On the other hand, the team visited district hospitals where drugs (such as fluconazole) to treat fungal infections were not available, and patients had to purchase the drug at local pharmacies; the cost of such drugs for a full course of therapy could be significant, especially for poor patients.

The Tanzania HIV strategic plan for 2003–2006 estimates that offering highly active antiretroviral therapy (HAART) to between 7,500 and 15,000 people in the general population would cost between \$6,418,140 and \$19,628,720. Offering HAART to 10,000–15,000 people to prevent mother-to-child transmission is estimated to cost another \$12,723,900 to \$16,406,200. Ensuring the availability of drugs to treat opportunistic infections, and providing for the necessary infrastructure and other support further increase these estimates. Even with limited antiretroviral drug distribution as described above, the costs estimated by the Ministry of Health for HIV care during 2006 is between \$79,626,451 and \$96,519,331, only a fraction of which is for the actual cost of antiretroviral drugs.

Given the limited resources of the public sector, and the high costs necessary for care and treatment, other sources of funding are necessary. Some costs may be borne by the private sector, including businesses, private individuals who can pay out of pocket, and those who have partial payment through their insurance scheme. Donor agencies will also play an essential role. The William J. Clinton Presidential Foundation, in coordination with the Tanzanian Commission for HIV/AIDS and the MOH, has embarked on a major fundraising effort for broad-based and rapid scale-up of antiretroviral therapy to ultimately benefit about 400,000 HIV-infected people throughout Tanzania. Other donor agencies include the World Bank and the Global Fund to Fight AIDS, Tuberculosis and Malaria, Axios Foundation as well as other multi-lateral and bilateral donors. Additional support may come from faith-based organizations and other donor agencies.

### **4.3 Key Strategic Issues for Care and Treatment for HIV**

Based on its review of care and treatment issues, and considering the mandate of the President's Emergency Plan for HIV/AIDS Relief, the team developed conclusions and recommendations in four strategic areas: knowledge, products and services, institutional capacity, and policy. Ten key issues were identified within these four areas as follows:

Knowledge: (1) Inadequate staff training/education

- (2) Limited awareness of the general population about the need for early HIV detection
- (3) Limited education of HIV-positive patients and their families about beneficial health measures, including nutrition

Products and services: (4) Inadequate systems for laboratory testing

Institutional capacity: (5) Inadequate capacity for treatment of opportunistic infections  
 (6) Limited capacity for follow-up with patients on antiretroviral therapy  
 (7) Inadequate systems for monitoring and evaluation

Policy: (8) Vertical and integrated programs for antiretroviral therapy  
 (9) Public/private partnerships  
 (10) Linkage of antiretroviral treatment with other HIV programs

Each key issue is discussed below, including conclusions and recommendations.

#### **4.3.1 Inadequate Staff Training/Education**

The team identified at least two types of HIV training that were needed: pre-service training for students/house officers in medical, nursing, and other professional schools, and in-service training for those already in clinical practice.

*Pre-service training.* A recent HIV/AIDS training needs assessment (*East and Southern Africa Regional HIV/AIDS Training Needs Assessment: Tanzania, A Country Report*)<sup>13</sup> reported that much of the pre-service training on HIV in Tanzania was integrated into or appended onto other courses or programs, rather than as a subject on its own. This report concluded that lack of clearly designed programs courses or modules posed several risks, including either duplication of material or absence of important information (because trainers might incorrectly assume that others were teaching HIV/AIDS); there is also a perceived risk of not knowing the quality of what was being taught.

According to data summarized in the care and treatment plan, the total number of general practitioners/medical officers who graduated from 1999 to 2002 was 220, or an average of 55 per year. The total number of pharmacists who graduated from 1999 to 2002 was 71, or an average of 18 per year. Although the team did not have the opportunity to meet with individuals responsible for coordinating such training, several physicians the team spoke with expressed concern whether the existing health training facilities could significantly “scale up” to admit and train many more students, without improving the existing training capacity.

*In-service training.* The HIV/AIDS training needs assessment found that some service providers were lacking even basic training on HIV/AIDS, including HIV diagnosis. This assessment also reported that some providers harbored fears such as getting infected by touching patients. Even among those who received some HIV training, there was a need for more knowledge on emerging issues, including those related to antiretroviral therapy.

<sup>13</sup> Nzioka, Charles et al. December 2002.

Training needs were reported for multiple areas related to patient management, including pathology, treatment, and other health-promoting measures such as nutrition. Other training gaps were in mother-to-child transmission, counseling and testing, and infection control precautions. In-service training was reported to be offered in a rather uncoordinated and unsystematic way (from the perspective of the national level).

In the field, the team spoke with a number of health care personnel at all levels. Uniformly, they indicated that lack of training and access to the most current information was a major barrier to providing good care for HIV-infected patients. They also indicated a strong desire to receive more HIV-related training at their institution or in their geographic area.

As part of this assessment, the team met with representatives of two of the six zonal training centers. At one such meeting, members indicated that providing clinical training was not in their area of expertise. At another meeting, members indicated that they did not have the capacity to directly provide such training to health care providers. However, they indicated they believed the zonal training center could play a role in coordinating such training. Representatives of the different zonal training centers meet annually.

Facilities for electronic communication (such as e-mail) and access to the Internet are limited in Tanzania; for example, the team was told that only two zonal training centers currently have access to the Internet. At the same time, in all the major towns, the teams found commercial Internet cafes, meaning that such access is possible. Some print materials (such as copies of the National Guidelines for Clinical Management of HIV/AIDS) have been developed, but distribution of these guidelines throughout the country seems variable.

The team identified two broad classes of in-service training needs. One need is specialized HIV training for those who are or who will be prescribing antiretroviral drugs. Training needs for this group include an understanding of the pathophysiology and natural history of HIV, the mechanism of action of different antiretroviral drugs, initiating and changing therapy, how to monitor patients on antiretroviral drugs (including both efficacy and adverse events), and other components of the national guidelines. Given the rapid changes that are taking place in HIV care, there is a need for continuous updates and access to the most current information.

The other type of training need, for the largest number of individuals, is for clinicians and other health professionals who will not be prescribing antiretroviral medicines, but who will be seeing HIV-infected patients, including some on antiretroviral therapy. Such individuals will need to know how to recognize signs and symptoms of HIV disease and how to treat common opportunistic infections or other complications. This is important for those who provide HIV care in wide variety of settings, such as gynecologists (who may see lesions such as recurrent or refractory vaginal candidiasis), dermatologists/venereologists (who may see patients with skin lesions suggestive of HIV), and dentists (who may see patients with HIV-related oral lesions). Providers also need to know and be able to recognize typical side effects of antiretroviral drugs (such as rash, hepatitis, or anemia), and know some of the most important interactions of specific antiretrovirals with other medications (for example, rifampin).

Another necessary part of any training program is associated with attitudes and stigma. Regrettably, the team heard that some of the greatest stigma that an HIV-infected patient faced was from health care providers. Such stigma can be overt or subtle and include refusal to provide patient care, refusal to touch or insistence on other unnecessary precautions to avoid risk of infection, lack of compassion, being highly judgmental, and general attitudes that communicate messages such as, “There’s nothing I can do for you. You can only go home to die.” The HIV/AIDS training needs assessment identified as training gaps interpersonal communication/counseling skills, confidentiality, ethics, and advocacy. These needs were expressed for multiple types of service providers for both pre-service and in-service training.

#### **4.3.1.1. Recommendation**

**Both pre-service and in-service training related to care and treatment of HIV infected patients needs to be significantly expanded at all levels throughout Tanzania.**

As part of implementing this recommendation, the team offers four major suggestions:

**a. A standard HIV care and treatment curriculum for different providers at different levels needs to be developed.**

This is a significant undertaking, and would involve experts from various disciplines, who should be compensated for their efforts. This curriculum would address the issues described above, including but not limited to antiretroviral therapy. Because the training needs of different individuals at different levels will vary, more than one curriculum will ultimately need to be developed.

As part of this training, the issue of provider attitudes and stigma needs to be addressed. This is a challenging area and involves training on appropriate infection control measures and how to communicate with patients whose social or sexual lifestyle the health care provider may find objectionable. Being able to relate to patients in a compassionate, supportive, and nonjudgmental approach is a challenge providers face not only in Tanzania, but also throughout the world.

**b. A formal plan for pre-service and in-service training related to HIV needs to be developed.**

A formal plan for disseminating the curriculum and other training materials throughout Tanzania needs to be developed. The zonal training centers may be able to play a role in helping implement a national training plan. Regardless of which plan is developed, it needs to be coordinated, monitored, and evaluated. All regions of the country need to be included in HIV training.

**c. Training needs to be ongoing, and regular updates need to be provided.**

Because of the rapid advances and changes in information related to HIV, any curriculum that is developed needs to be updated regularly and disseminated to providers at all levels throughout the country. If new guidelines are developed, there

cannot be a lengthy time for official review and approval before they are made available. Similarly, HIV education updates need to take place on a regular basis. This includes new information on diagnosis and treatment of HIV and HIV-related complications, and side effects of HIV therapy. Just as there are multiple audiences and training needs for the initial HIV curriculum, there will be different needs for the HIV updates.

**d. A formal accreditation system should be established for those providing primary care for patients with HIV infection, including those who prescribe antiretroviral therapy.**

As described above, the current situation in Tanzania for prescribing antiretroviral therapy is characterized by suboptimal use in many regards, including use of monotherapy and failure to maintain consistent adherence. Simply having wider access to such drugs does not mean that the drugs will be used correctly. Accreditation of HIV care providers allows patients to know that they will receive the best and most knowledgeable care from such individuals. The actual mechanisms for such an accreditation process will need to be determined, and representatives from both the public and private sectors will need to be included in the accreditation process. Developing an accreditation process will most likely include creation of a core curriculum, development of a licensing exam or other evaluation process, and the requirement for continuous medical education, with possibly a requirement for re-accreditation at intervals to be determined. In order to maintain the integrity of the process, an external review and evaluation may periodically be conducted.

This proposal is most directly relevant to health workers and should be discussed and planned in coordination with the proper national medical licensing bodies and other appropriate physician organizations. Once this accreditation process is developed, it will be critical that community-based organizations and other groups that provide support for HIV-infected individuals be aware of it so that HIV-infected patients whom they counsel can be directed toward accredited HIV care providers. For individual physicians, this will result not only in an increase in status; it will also provide a financial incentive to go through the required training and updates and to receive accreditation.

#### ***4.3.2 Limited Awareness of the General Population About the Need for Early HIV Detection***

A recurrent theme at all levels of the health care system was that patients with HIV infection do not present for care until very late in the course of their illness. This is understandable, given the limited options that patients currently have. Clearly, patients are not being recognized with acute infection and, largely, are not diagnosed during the chronic, asymptomatic stage. When individuals begin to develop initial signs and symptoms of illness, they may attribute those to other causes, such as malaria. Even when patients develop illnesses such as tuberculosis or chronic diarrhea, they may not seek and receive HIV testing. The team heard that most dentists who see patients are not adequately trained to recognize that certain oral manifestations, such as oral candidiasis or Kaposi sarcoma, may be indicative



of HIV infection. Even after illness develops, patients may initially wait or seek care from a traditional healer. Personal observation by a member of the team at one HIV clinic found that many patients were presenting when their CD4<sup>+</sup> count was 10 cells/mm<sup>3</sup> or less.

In a number of interviews, the team heard that the Tanzanian general public is poorly informed about HIV, including the natural history, the signs and symptoms of HIV disease, and methods for diagnosis. Especially when antiretroviral therapy becomes more widely available, the general public (including many persons who may have HIV infection themselves or a close relation to someone who is HIV-infected) needs to be better educated about early detection so that HIV monitoring and, when indicated, appropriate treatment, can be facilitated. This is especially true for individuals at greatest risk for HIV infection.

#### **4.3.2.1. Recommendation**

**The general community, including the most vulnerable people, need to be better educated about the methods and benefits of early HIV case detection, assuming that the medical care system has something to offer.**

This issue is also addressed in the recommendation on linkages with voluntary counseling and testing. In many industrialized countries, there has been a major push for persons with HIV infection to learn their status so that they can receive medical evaluation, counseling, and, when indicated, medical intervention. This includes not only provision of antiretroviral drugs, but also medical screening for HIV-related complications and, when appropriate, provision of prophylaxis against opportunistic infections. Encouraging early HIV case detection for these purposes makes the most sense if the health care system is prepared to receive such individuals, and if it has the knowledge, willingness, and capacity to provide the appropriate interventions. Delivering such educational messages may be especially important for the most vulnerable people, because a large proportion of them will be HIV-positive. Given the high rates of HIV in the general community, it is also reasonable to expand these messages to the public at large. This will require working with nongovernmental and community-based organizations, and using other information and education strategies that are believed to be most effective to reach vulnerable populations.

#### ***4.3.3 Limited Education of HIV-Positive Patients and Their Families About Beneficial Health Measures, Including Nutrition***

Based on interviews with health professionals in a variety of settings, the team concluded that many patients with HIV infection and their families are poorly informed about ways to maintain and optimize their health status. This includes measures to improve nutrition, early detection and treatment for opportunistic infections, and (when antiretroviral drugs become available) adherence to treatment. Issues related to adherence are discussed in the section on patient monitoring, but this is clearly a crucial part of patient education.

With respect to nutrition, in some cases, patients who are poor cannot obtain sufficient quantities of food. Unfortunately, this was true even for some hospitalized patients. Typically, in Tanzanian hospitals, patients must have food brought in by family or friends. Patients with

limited support may receive only one meal a day, with inadequate quantities of food. Other patients have adequate nutrition until they become ill, at which point (especially if the patient is also a wage earner), their food-purchasing ability is drastically reduced. In addition, wasting syndrome is a common condition in patients with AIDS, and nutritional deficiencies may be exacerbated by complications such as chronic diarrhea with malabsorption. Finally, the team learned that many HIV-infected patients are nutritionally deficient because of poor diet and food choices. Such patients have access to natural foods, including locally grown beans, fruits, and vegetables, but they instead choose processed and low-nutrition alternatives.

#### **4.3.3.1. Recommendation**

**Education for people with HIV and their families needs to be strengthened so that they can better adopt ways to optimize their care, including improved nutrition.**

The team agrees with the results of a previous consultation (*Overview of Community Home-Based Care Services for People Living with HIV/AIDS and Other Chronic Illnesses in Tanzania*) that community home-based care provides an important opportunity for such education and support. This consultation concluded that a well-functioning community home-based care program provides a continuum of care for persons with HIV disease from a health care facility to the home environment; the primary aim of such a program is to strengthen the existing capacity of the home and community to care for its members with HIV/AIDS, by building on the traditional family and community structures that support chronically ill people.

Other strategies should also be explored to provide health information for HIV-infected individuals. This includes working with nongovernmental and other community-based organizations that provide counseling and support for HIV-infected individuals, as well as those working with high-risk populations (which presumably include large numbers of HIV-infected persons). Development of pamphlets, comic books, posters, and other information for HIV-infected persons could also be considered.

#### **4.3.4 Inadequate Systems for Laboratory Testing**

A number of tests have been recommended for the monitoring and care of HIV-infected individuals. The Tanzanian National Guidelines for Clinical Management of HIV/AIDS recommend CD4+ lymphocyte count testing at baseline to help guide decisions about initiation of therapy. In consideration of limited resources, such testing is not recommended for routine follow-up. Some guidelines have indicated that total lymphocyte count can be used as a substitute for CD4+ count if the latter tests are not available. Although there is a correlation between these tests, there is controversy about the utility of lymphocyte counts; several studies in Africa have indicated that total lymphocyte count is not sufficiently useful to predict CD4+ counts in many settings. The National Health Sector Strategic Plan has indicated as a goal to provide CD4+ count facilities in all regional hospitals. It is expected that in the public sector hospitals by the end of this year, eight sites will be providing CD4+ counts; these include referral or regional hospitals such as Muhimbili National Hospital in Dar es Saalam; Bugando Medical Centre, Mbeya Referral Hospital, and Kilimajaro Christian

Medical Centre. The private sector also has a number of centers with this capacity. Thus, by the end of this year, a larger number of HIV-infected patients should have access to CD4+ count determinations. More sophisticated tests used in industrialized countries, such as viral load and viral resistance testing, are not perceived to be essential for the management of HIV-infected Tanzanian patients.

The National Guidelines for Clinical Management of HIV/AIDS also include recommendations for other routine laboratory tests for initial evaluation and follow-up, including complete blood counts and liver function tests. Examples of side effects associated with commonly used antiretroviral drugs include anemia and neutropenia with zidovudine, elevated liver enzymes with nevirapine, and metabolic complications including glucose intolerance/diabetes with protease inhibitors. Although the rates of such complications are well described for patients in industrialized countries, the frequency with which they will develop among patients in Tanzania is unknown. This is especially important because patients in Tanzania may have other co-morbidities, such as malaria (which further compromises anemia) or chronic hepatitis, which may exacerbate the hepatic complications associated with certain HAART regimens.

The team found that many hospital laboratories, including at least one referral and one regional hospital, could not perform all these basic tests. Typically, laboratories could perform complete blood counts and serum glucose determinations, but many laboratories were unable to perform basic tests of kidney function (such as a serum creatinine) or liver function tests (including hepatic transaminases). Although serologic tests for syphilis could be performed, testing for hepatitis B or C virus was also not available. In addition, even in those laboratories with the capacity to perform a specific test, there were periodic shortages of reagents or other problems that made such testing unavailable.

#### **4.3.4.1. Recommendations**

**The team supports the national goal of making CD4+ count determinations more available.**

Although some commentators have suggested basing treatment decisions on clinical status alone, this option excludes asymptomatic or minimally symptomatic patients with only mild degrees of immunosuppression, who may have favorable responses to antiretroviral therapy. A number of lower-cost alternatives for CD4+ count determination are being developed, such as the Coulter Manual CD4+ count kit and the Dynal Dynebeads system. The utility of these systems for Tanzania could be explored. Given the currently weak laboratory infrastructure and problems with availability of laboratory reagents, it probably is most feasible to have such testing restricted to a smaller number of referral centers around the country where adequate reagents and trained personnel can be ensured, and where quality control and other necessary measures can be provided.

**The general laboratory infrastructure to perform basic hematology, chemistry, and other necessary tests needs to be significantly strengthened.**

Similar to our recommendation that providers must be accredited before providing antiretroviral therapy, the team recommends that facilities must meet certain minimum criteria before antiretroviral therapy can be administered at that institution. Some of these criteria relate to logistical and operational characteristics, such as those for drug storage and delivery. We also propose that an institution be able to perform or have access to certain defined laboratory tests; hospitals that do not have a certain capacity can therefore share resources with those that do. This capacity should at a minimum be consistent with national guidelines for HIV treatment. Implementing this recommendation will not only require a regular supply of test reagents, but also of necessary equipment and appropriately trained laboratory personnel be available.

#### ***4.3.5 Inadequate Capacity for Treatment of Opportunistic Infections***

Although provision of antiretroviral therapy can reduce the frequency of opportunistic infections, it does not eliminate them entirely. The team found that the current capacity to treat HIV-related opportunistic infections throughout the health system is variable. The current National Guidelines for Clinical Management of HIV/AIDS include treatment recommendations for cryptococcal meningitis, candidiasis (including esophageal candidiasis), pneumocystis pneumonia, cerebral toxoplasmosis, intestinal parasitic infections, tuberculosis, herpes simplex, herpes zoster, and serious bacterial infections, including pneumonia and septicemia. Although certain drugs (such as cotrimoxazole and tuberculosis drugs) are available to treat some of these infections, the team found that for other opportunistic infections, they are not. In a number of hospitals, antifungal therapies to treat cryptococcal meningitis or esophageal candidiasis were not available, nor were drugs available to treat severe complications of herpes, such as disseminated herpes zoster disease.

##### **4.3.5.1. Recommendation**

**The clinical health system should be improved at all levels to better diagnose, treat, and prevent common opportunistic infections.**

Health care providers, as part of their training, need to know how to recognize and treat opportunistic infections, consistent with national Tanzanian guidelines. Adequate supplies and other equipment required for diagnosis should be available. The health system also needs to ensure that adequate drugs are available to treat the most common infections. This therapy should be not only at centers where antiretroviral therapy is provided, but also at regional and local facilities where HIV-infected patients may seek health care. In addition to treating existing opportunistic infections, health care facilities need to be able to deliver prophylaxis against opportunistic infections. This includes both primary prophylaxis to prevent the first episode, and secondary prophylaxis to prevent recurrent episodes. Current data available on the distribution of different opportunistic infections in Tanzanian patients with AIDS are limited. As additional information becomes available (including that through improved diagnostic facilities), national guidelines for opportunistic infection prophylaxis may change or expand.

#### 4.3.6 Limited Capacity for Follow-up with Patients on Antiretroviral Therapy

Although very little data exist on follow-up rates among patients receiving antiretroviral therapy in Tanzania, Dr. Kaushik Ramaiya told the team that in a preliminary survey he conducted of patients receiving such therapy in private hospitals, follow-up rates were highly variable. Although the team was unable to identify other data on follow-up rates or adherence to antiretroviral therapy, data from the tuberculosis control program are illustrative. The National Tuberculosis Control Program has achieved a treatment success rate of almost 80 percent. Some of the most prominent features of the tuberculosis control program include the following:

1. *Integration of local clinics and community health workers.* Although TB drug distribution occurs at accredited centers, providers in district or other local health care facilities are following many patients on TB therapy. Several strategies are being used. For example, the TB coordinator in Mbeya indicated that his program is exploring the use of community members who are trusted by the patient to help support individuals in completing a full treatment course.
2. *Standardized treatment regimens.* The initial TB treatment regimen is the same throughout Tanzania. This means that providers even at the local level know what the recommended regimen is for TB.
3. *Standardized follow-up guidelines.* This includes obtaining follow-up sputum samples at defined time points during treatment and recommendations for management if the patient remains smear positive.
4. *A reliable system of drug supply.* Although the team heard that shortages and “stock-outs” occurred with other drugs, it did not hear about situations in which TB drugs were unavailable. The national TB coordinator receives requests from the regional level and then works with the regional coordinators to ensure the drug is distributed. There is a tight accountability system to track drugs at all levels.
5. *Standardized and simple record keeping systems.* All patients carry with them a TB card that includes identifying information and space to record drugs they have been prescribed and taken. Standardized information related to treatment outcome is collected, collated, and evaluated at a variety of levels.

##### 4.3.6.1. Recommendation

**Scaling-up of antiretroviral therapy should include a plan for monitoring of patients and measures to promote adherence that builds on the experience of the National Tuberculosis and Leprosy Program.**

There are a number of reasons for careful follow-up of patients on antiretroviral therapy. One is to monitor patients for adverse events. Besides laboratory abnormalities described in the section on laboratory testing, other side effects may include severe rash, vomiting or diarrhea, pancreatitis, and peripheral neuropathy. Some of these may require a change in therapy or treatment discontinuation, and others can be treated with supportive measures. National Guidelines for Clinical Management of HIV/AIDS stress the importance of monitoring patients on antiretroviral therapy for side effects.

The other reason for careful monitoring is to minimize treatment failure. A number of studies indicate that if adherence is less than the high level of 95 percent, the risk for virologic failure increases significantly. Studies from industrialized and developing countries indicate that such failure is due to the emergence of drug-resistant HIV strains. Maintaining good adherence is therefore critical. Although patients on HIV therapy in Tanzania may face a number of threats to adherence, the TB program shows that good adherence is possible. Certainly a number of important differences exist between TB and HIV treatment, the most significant being the need for life-long therapy with HAART. However, many lessons from the TB program may be beneficial. These include the use of community health workers or family members to help encourage adherence, regular follow-up in supportive and accessible settings, use of standardized guidelines, and patient education. Other adherence-promoting measures include simple regimens (in terms of dosing frequency and number of pills) and development of a good and trusting provider-client relationship. Follow-up rates are an important indicator to continuously monitor, so that different strategies for promoting adherence can be evaluated. Rates of adverse events and factors that increase their likelihood should also be collected, and can then be incorporated into treatment guidelines.

#### *4.3.7 Inadequate Systems for Monitoring and Evaluation*

Throughout the consultation, the team found that one of the biggest barriers to control of HIV/AIDS was the lack of data. When data were collected, there was no formal system for analysis, dissemination, and feedback so that the information could be used for public health or treatment planning and evaluation. AIDS case data are characterized by underreporting. The team was unable to find good studies on the epidemiology of HIV-related illness, including those concerning distribution of different opportunistic infections and other HIV-related complications in patients with HIV infection. The Ministry of Health recognizes the importance of these issues. The National Multisectorial Strategic Framework on HIV/AIDS reports that although guidelines have been developed in many areas, an overall monitoring and evaluation plan has not been developed, and the existing Monitoring and Evaluation Unit does not have a sufficiently strong mandate to put the plan into effect. The report also notes that systems are too fragmented and that surveys are planned and implemented in isolation from each other.

Despite the lack of basic monitoring and evaluation systems in the public sector, different U.S. and European institutions are expending considerable funds to conduct HIV-related research. The team saw one research project in Mbeya that evaluated HIV incidence and prevalence in barmaids. Although the testing was conducted close to their worksite (for which participants were paid), patients had to travel to the main hospital to learn their HIV results. Given this inconvenience and lack of a positive incentive, interviews with barmaids in one bar found that none had sought counseled regarding HIV status. In addition, the study found an overall prevalence of 68 percent in this population, which was not known to the barmaids or the public health/medical officials in Mbeya. The laboratory facilities for this study were state-of-the-art, with sophisticated equipment and trained technicians for tests such as

determination of interferon levels as a measure in lymphocyte stimulation. This was at the same hospital where the regular hospital laboratory did not have the reagents and capability to perform basic liver function tests and serum creatinine levels.

#### **4.3.7.1. Recommendation**

**The monitoring and evaluation system for HIV/AIDS needs to be significantly strengthened in all areas, including those related to provision of antiretroviral therapy.**

The team agrees with a Tanzanian Commission for HIV/AIDS assessment that lack of monitoring and evaluation imposes a serious constraint on Tanzania's ability to move forward in combating the AIDS epidemic. Besides the need for additional strategic planning, resources for monitoring and evaluation are limited in almost all areas. Areas of inadequate support include lack of dedicated personnel, lack of training, and lack of equipment (including computers) and other supplies. Data that are collected need to be analyzed and disseminated in a timely fashion for purposes of action, including development and evaluation of HIV programs.

The Commission report identified a number of important surveillance indicators for the 2003–2006 period. To this list should be added additional resources to monitor HIV morbidity, including the distribution of specific opportunistic infections and other HIV-related diseases. Monitoring is also critical to the planning and evaluation of any program to implement antiretroviral therapy. For example, during the first year of any scale-up for antiretroviral therapy, there should be rapid and ongoing evaluation of that year's activities before moving to the second year; in this way, program deficiencies and problems can be corrected and the overall plan revised to optimize the chances of success. Although identification of the specific monitoring and evaluation criteria related to antiretroviral therapy is beyond the scope of this evaluation, it would likely include indicators such as number of drugs delivered, number of patients treated, number of providers/facilities participating, baseline characteristics of patients treated, adverse event rates, response to therapy, loss to follow-up rates, and other operational criteria. The tuberculosis control model of collecting relatively simple, standardized, and uniform data on a national basis may be a useful model in designing the specific characteristics of this program.

It is likely that academic and other institutions from industrialized countries will want to conduct research on the many critical issues raised by scaling up antiretroviral therapy. Although in many regards this is a positive development, the introduction of outside research projects should adhere to certain guidelines. The specific list of such guidelines is beyond the scope of this consultation, but it would presumably include ethical conduct of research (including making results available to both patients and the Tanzanian health community), and a substantial investment in the Tanzanian monitoring, evaluation, and research infrastructure (in terms of training local personnel, provision of equipment, and other positive measures that meet the current needs of the country).

#### ***4.3.8 Vertical or Integrated Programs for Antiretroviral Therapy***

One issue that arose in this evaluation and in our team discussions was whether provision of antiretroviral therapy should be through a vertical or integrated program. Each approach has certain advantages. The National Tuberculosis Control Program is one example of a vertical program that is well articulated within the overall public and nongovernmental health delivery system and is highly successful. On the other hand, the team was told that the Ministry of Health has adopted an integrated approach as the overall national strategy for the health sector, with a decentralized system of provision of health services, and considerable responsibility for management of health facilities at the regional and district level.

##### **4.3.8.1. Recommendation**

**Antiretroviral therapy should be administered as a vertical program, with an integrated, decentralized strategy for treatment of opportunistic infections and routine follow-up of patients with HIV infection.**

In considering the actual provision of antiretroviral therapy, the team identified a number of factors that favor a vertical program. Managing a patient on antiretroviral therapy is complicated, and requires a high degree of specialized knowledge about the pathophysiology of HIV infection, current treatment guidelines, adverse drug events, drug interactions, and patient follow-up. Data from industrialized countries support the concept that that therapy is most successful when it is administered by trained specialists. Given current human resource constraints (in terms of both number of personnel and training), the potentially high cost of failure (in terms of widespread HIV drug resistance), the need to be up-to-date on the most current information, and certain similarities between an antiretroviral and tuberculosis treatment program, the team believes that a vertical program ensures the greatest chance of success. A vertical system would also be preferable given concerns about possible pilferage and the importance of a tight accountability system for tracking drugs.

At the same time, all providers need to be somewhat knowledgeable about HIV care. This knowledge includes diagnosis and treatment of common opportunistic infections and other complications (such as skin rash), as well as recognition of common or severe side effects in patients who take antiretroviral drugs. The “routine” treatment of HIV-infected patients should be managed in an integrated fashion at the local level without the need to refer to an HIV specialist. In addition, the large and rural-based nature of Tanzania and its health care system argue for the capacity to treat common complications at the local levels and in a decentralized fashion, based on national guidelines and training. This minimizes the burden on a limited number of specialists, and allows patients to have accessible and timely care.

#### ***4.3.9 Public/Private Partnerships***

Approximately 40 percent of all health care facilities in Tanzania are privately owned, including for-profit hospitals and clinics, faith-based hospitals and clinics, nongovernmental organizations, and health facilities associated with businesses (including hospitals directly run



by companies as well as those operating on a contract basis for provision of health services). The team saw examples of outstanding care in each type of facility. For example, the team visited a mission hospital in the Iringa Region that was well run by caring and conscientious staff and demonstrated excellent accountability, including that related to drug management. The team met with one private company (Mbeya Cement) that had a good employee HIV awareness program and was interested in the issue of providing HIV care to its employees. This company provides health care to approximately 300 employees and approximately 1,000 dependents.

Currently, because antiretroviral drugs must be paid for, much of this therapy is being delivered through the private sector, including for-profit facilities. Although many employees and their families receive care through company-associated health facilities, a recent survey found a wide range in HIV care being provided through these programs (Management and Leadership Program, Private Sector Health Care Delivery Options in Tanzania). In surveying seven companies about their HIV care programs, only two currently pay for antiretroviral drugs, and only four pay for treatment of opportunistic infections. This number will, one hopes, increase in the future; given the tremendous toll that HIV has taken on the workforce in Tanzania, programs to keep employees healthy and productive have obvious business as well as personal advantages.

#### **4.3.9.1. Recommendation**

**The private sector should be fully included in all aspects of a national antiretroviral program.**

Any national antiretroviral program that is established should have a public/private partnership as a major operating principle. Representatives of the private sector should be fully involved in planning (including development of guidelines and accreditation standards), program implementation (including training, drug administration, and monitoring patients on therapy), and evaluation (including providing data to help assist in program evaluation). The team was impressed by a number of thoughtful suggestions made by members of the private sector about how to most successfully implement antiretroviral therapy and other aspects of HIV care. Any national or local advisory committee that is set up should include representatives from different areas of the private sector.

#### **4.3.10 Linkage of Antiretroviral Treatment with Other HIV Programs**

A number of programs in Tanzania currently provide care for HIV-infected persons or a means through which HIV infection may be initially diagnosed. Examples of such programs include voluntary testing and counseling centers, antenatal clinics, prevention of mother-to-child transmission, tuberculosis clinics, and clinics that offer treatment for sexually transmitted diseases.

##### **4.3.10.1. Recommendation**

**Linkages should be strengthened between antiretroviral treatment programs and other HIV programs, including testing and counseling, prevention of mother-to-child transmission, tuberculosis care, sexually transmitted disease treatment, and nutrition.**

1. *Voluntary testing and counseling program.* As described elsewhere in this report, testing and counseling are important components of the HIV strategy in Tanzania. Because such centers may be the initial point at which individuals learn that they are HIV-positive, it provides a logical time (as part of post-test counseling) to refer individuals to a center where they can receive additional clinical evaluation and, if indicated, initiate HIV therapy. The team heard on a regular basis that many individuals in Tanzania do not seek HIV testing services because they feel that even if they learn they have HIV infection, the health system has nothing to offer them. However, once increased care interventions are available, some individuals may be much more likely to agree to HIV testing.
2. *Antenatal clinics and programs for prevention of mother-to-child transmission.* Pregnant women may initially learn their HIV status as part of their prenatal evaluation and may be motivated to seek treatment to protect both themselves and their children. As discussed elsewhere in this report, Tanzania already has a number of programs in place for prevention of perinatal transmission. Although nevirapine significantly reduces perinatal HIV transmission, a full HAART regimen remains the most successful way to prevent such transmission, reducing this risk even further to 1 percent to 2 percent; HAART may also help to reduce postnatal transmission through breastfeeding.

In Tanzania, there is strong interest in moving from prevention of mother-to-child transmission (PMTCT) to PMTC-Plus, which includes giving HAART to the mother and, if indicated, to the entire family. Given the experience and resources necessary to correctly initiate treatment and monitor those on antiretroviral therapy, it makes strong sense for programs to prevent perinatal transmission to be closely linked to other antiretroviral treatment programs, with coordinated efforts.

3. *Sexually transmitted infection program.* Persons attending a clinic seeking treatment for a sexually transmitted disease are at high risk for HIV infection, due to both unsafe sex and the effect of sexually transmitted diseases on increasing the risk of HIV transmission. HIV testing and counseling are important components of a clinic program for treatment sexually transmitted infections. When clients receive their results during post-test counseling, this serves as a logical point to refer HIV-positive persons for clinical evaluation and treatment.

In addition, because many clinics that offer treatment for sexually transmitted infections are venereology/dermatology clinics, clinicians may see patients with rashes and other skin diseases that are highly suggestive of HIV-related conditions. Such patients who already exhibit signs of HIV disease may also be ideal candidates for initiation of antiretroviral therapy, before their level of immunosuppression becomes more pronounced.

4. *Tuberculosis program.* Given the large number of patients with tuberculosis in Tanzania who are HIV-positive, tuberculosis clinics are an important site for identifying HIV-positive individuals. Because tuberculosis may develop as one of the earlier manifestations of HIV disease progression, such patients may be ideal candidates for initiation of antiretroviral therapy, before their level of immunosuppression becomes more pronounced.
5. *Nutrition Programs.* A critical focus should be placed on developing linkages with nutrition programs. Persons living with HIV/AIDS face critical nutrition problems due to anorexia, pain, nausea, vomiting, diarrhea, and malabsorption. Recurrent opportunistic infections contribute to malnutrition and micronutrient deficiency. Providing nutrition counseling and assisting persons living with HIV/AIDS and their households to maintain appropriate nutrition are critical aspects of any HIV care and treatment program.

The findings of the assessment team indicate that only one nongovernmental organization (The Centre for Counseling, Nutrition and Health Care) focuses attention on issues related to HIV care and nutrition. The Tanzania Food and Nutrition Centre is a potential partner that could assist in articulating a HIV/AIDS and nutrition program. It will be important to commission a specific study to understand the nature and scope of nutrition problems facing people and households living with HIV/AIDS. As it is the case for many aspects of the HIV/AIDS epidemic, there is very limited specific and documented knowledge and understanding of nutrition issues facing households and persons living with HIV/AIDS and related current responses to this important problem.

Besides these specific examples, other linkages may be identified and strengthened. As indicated earlier, community-based organizations may play an important role in informing the general public and members of high-risk groups about HIV care options. Linkages between antiretroviral treatment programs and nongovernmental organizations that provide other kinds of support for HIV-infected individuals (including community-based home care) should also be strengthened.

#### **4.4 Treatment and Prevention: Opportunities for Linkage**

Prevention and treatment are integrally related, and strong programs in both areas are essential to combating the HIV epidemic. The availability of antiretroviral treatment may help to strengthen prevention efforts on a variety of fronts. Examples of such linkages include the following:

1. Availability of antiretroviral therapy may cause more persons to seek HIV testing and counseling.
2. Availability of antiretroviral therapy may cause more women to seek antenatal services, including programs for prevention of mother-to-child transmission.

3. Availability of antiretroviral therapy may reduce the sense of hopelessness and futility that many at-risk individuals (including youth) feel, helping them to be more receptive to behavior change.
4. Data from industrialized countries indicate that some persons may feel that because they are on HIV therapy, they are no longer infectious, leading to relapses into unsafe sex. Expansion of antiretroviral therapy strengthens the need for behavioral surveys to help evaluate whether this is occurring.
5. The availability of postexposure prophylaxis is an important component of an infection control/prevention program in the health care setting.
6. If HIV-positive persons are now regularly accessing the health care system, they create additional opportunities to counsel them about risk reduction, avoiding further transmission.
7. Strengthening the infrastructure required to provide antiretroviral therapy (including in the human resource area) may benefit other HIV programs and the overall health delivery system as well.

## 4.5 Other Issues

In addition to the above, the team highlights four other important issues: 1) number of health care personnel; 2) other infrastructure support; 3) management, accountability, and supervision; and 4) stigma.

### *4.5.1 Number of Health Care Personnel*

The team heard in a number of interviews that shortages exist at all levels of the health care system. According to an HIV/AIDS inventory conducted by the Ministry of Health and Family Health International, the number staff available at health care facilities was below the required Ministry of Health staff establishment. According to the National AIDS Control Program, the number of specialists at three referral hospitals (Bugando Medical Centre, Mbeya Referral Hospital, and Kilimajaro Christian Medical Centre) is low compared to the increasing demand to provide care for persons living with AIDS. Each hospital had only two to three physician specialists and only zero to two microbiologists. At the level of the regional hospital, district hospital, health center, and health dispensary, these limitations are even more profound. For example, a survey of four regions in Tanzania mainland found that regional hospitals had no specialists, only two to five medical officers, no microbiologists, and only zero to two laboratory technologists/technicians. The Ministry of Health has concluded that a severe shortage of qualified health workers exists at all lower-level health facilities. Members of the team also heard that current levels of staffing for physicians and nurses per number of patients are below the World Health Organization recommendations for developing countries.

If there is now a serious shortage of trained manpower in most categories and in most health care facilities, a number of possible explanations exists. First, the Ministry of Health has worked under a hiring freeze in the public hospitals since 1991. The freeze was reportedly instituted to reduce salary costs and because of the assertion that some health care facilities were overstaffed. Second, low salaries and other working conditions may serve as a

disincentive for currently trained health professional to work in certain settings. One related question is whether hiring staff for donor-funded projects (where salary or working conditions may be better) may lead to increased loss of qualified individuals from public sector programs. Another related question is whether, for the same reasons, professionals graduating from Tanzanian schools end up working in other countries. Third, medical staff themselves may be affected by HIV-related illness and death. For example, in 2000, 18 workers from 9 regional hospitals died from AIDS, but as of 2002 they had not been replaced. Fourth, the number of health professionals graduating from pre-service training programs may need to be increased.

In reviewing available documentation, there seem to be different opinions about whether the health worker shortage is due to a distribution problem (e.g., having an available pool of practitioners who cannot work because of the hiring freeze, or having too many providers in central facilities and too few at the local level) or an overall shortage of qualified people at all levels. Some individuals with whom the team spoke believe the issue is not simply one of distribution of existing staff, but also of a critical need that exists to train more health professionals. However, the opinion was also expressed that the current capacity of medical and other professional schools to increase the number of qualified students they graduate was limited, and that additional resources and other investment in improving pre-service training capacity were necessary. This is clearly a critical issue that needs to be carefully evaluated and addressed at multiple levels, especially if antiretroviral therapy is to be introduced into the HIV care system. Finally, it is important to mention that this shortage of health workers is occurring within the context of a regional human resources crisis in health in general, as documented in a recent REDSO/ESA regional study.

#### *4.5.2 Other Infrastructure Support*

Although the recommendations and other discussion in this report focus on specific resource constraints, additional improvement is needed in other areas as well. For example, many health care facilities are in poor physical condition, diagnostic and other equipment is often broken, and transportation options for both patients and supplies may be seriously limited. Additional resources are needed to improve physical facilities, ensure maintenance of equipment, strengthen the transportation capacity, and provide support to the health care infrastructure in many other ways.

#### *4.5.3 Management, Accountability, and Supervision*

The team is aware that accountability is an issue and a concern in both the public and private sectors. Unfortunately, with a large infusion of funds and other valuable resources for antiretroviral therapy, the potential for mismanagement exists. If mismanagement is diffuse within the program of HIV care and antiretroviral therapy, it poses a significant threat to unraveling the entire program and ensuring that it will fail. Therefore, a strong and enforceable system of accountability is needed at all levels. The details of this accountability will need to be determined, but it would presumably include both internal and external evaluation to ensure that funding, drug distribution, and all other components are being properly administered. This will require support from the Tanzanian government at the

highest level and involvement of the civil society. USAID may also explore possible linkages with democracy and governance related interventions. Finally, the ongoing DELIVER Project (through John Snow Incorporated) assessment of logistics capacities will also certainly recommend specific mechanisms to strengthen accountability of antiretroviral drugs.

Any national HIV care program, including one that involves antiretroviral drug treatment, will require strong and effective management, careful supervision of personnel, and good program administration. Plans need to be in place for management and administration of drug supply, purchasing of materials, distribution of funds, creation of reports and tracking documents, and many other essential components. At the program level, there need to be good systems for personnel supervision, to ensure quality performance and to avoid problems. Training and other technical assistance will be required on a variety of levels to strengthen management, program administration, and personnel supervision capabilities.

#### *4.5.4 Stigma*

The team had a number of discussions with individuals about the issue of stigma. Stigma and discrimination are important barriers to success in combating the HIV epidemic. As discussed earlier, one important source of stigma is from health professionals themselves, and this needs to be addressed in training programs.

With respect to care and treatment, the team heard different opinions about the extent to which stigma would slow progress in implementing provision of antiretroviral therapy. Some providers expressed the strong opinion that provision of antiretroviral therapy would help to reduce stigma. For example, the team visited a successful site for prevention of mother-to-child transmission at a district hospital. Initially, pregnant mothers were slow to come forward, be tested for HIV infection, and to receive nevirapine to prevent perinatal transmission. However, as the program continued, more and more people came forward, largely because of positive word-of-mouth information that it was a good program. A major reason for this positive response was a dedicated and talented nurse coordinator, and women who came into the clinic often asked for her in particular. This supported the conclusion that with a good initial impression and user-friendly, supportive services, treatment can be offered successfully.

Others expressed the opinion that stigma might be a significant factor in preventing HIV-infected persons from coming forth to seek treatment. Team members met with a representative from PharmAccess International, which supports and coordinates programs to provide HAART in a variety of African-based workplace programs; PharmAccess is also working with to provide HAART in military hospitals and to Netherlands Embassy employees. This representative indicated that the uptake of antiretroviral therapy in many of these programs had been very slow because of issues surrounding stigma, and that there was capacity to treat more patients than were coming forward for antiretroviral medications.

Ultimately, the issue of stigma may be multifactorial, and its impact may depend on a variety of factors including the health status of the individual (whether they are ill or asymptomatic), and the setting in which treatment is offered (such as a workplace in which confidentiality

concerns may be greater, as opposed to the more “anonymous” setting of a hospital). The team believes strongly that concerns about stigma should not prevent moving forward with antiretroviral therapy. At the same time, the impact stigma will actually have on HIV testing and acceptance of HIV therapy needs to be evaluated.

## 5. Selected Crosscutting Issues and Gaps

### 5.1 In-Service and Pre-service Training in the Health Sector

With a burgeoning need for training in all aspects of HIV/AIDS (counseling, surveillance, monitoring and evaluation, care, treatment, and support, along with other training events associated with the essential health care package), a real threat exists that the quality of service delivery will be compromised. Investing in training without follow-up, supervision, and proper training information management systems is known to be ineffective. In Zambia, a recent AIDS workforce study found no correlation between length of training and counseling performance in voluntary counseling and testing and prevention of mother-to-child transmission training programs.

Training in HIV counseling may take as long as six weeks in Tanzania; residential training seems to be the norm. In addition, a training information management system does not exist at any level. In Tanzania, successful tuberculosis, immunization, and family planning programs have demonstrated the importance of supervision and follow-up. It will be also essential to learn from and build on the wealth of experience in innovative training and learning approaches to improve the quality of service delivery. Establishing training management information systems will be essential to track and direct follow-up training and investments for professional staff growth.

The institutional and technical capacity of Tanzania's numerous pre-service health institutions is unable to respond to the expanded HIV/AIDS portfolio, and changing a curriculum is a time-consuming process. One effective approach is to foster linkages between pre-service and in-service institutions and introduce complementary HIV/AIDS teachings without waiting for the redesigned curriculum. USAID support to pre-service institutions should target not only tutors and students, but also school management.

### 5.2 Implementation Monitoring and Evaluation

As indicated in the Poverty Monitoring Master Plan,<sup>14</sup> most sub-Saharan Africa countries have weak routine management information systems. A professional culture of data collection is weak at a practical level; activity information is driven primarily by requirements for national or donor reporting. This weakness was emphasized in the District Capacity Assessment.<sup>15</sup>

In the health sector, the current health management information system (HMIS), which is designed to monitor the essential health package, is unable to support the monitoring and reporting requirements in an expanded response to HIV/AIDS. In light of the urgency of the

<sup>14</sup> United Republic of Tanzania. December 2001.

<sup>15</sup> Management Sciences for Health. January 2002.



HIV/AIDS epidemic, a dedicated monitoring and evaluation system must be established to guide the Ministry of Health's HIV/AIDS Care and Treatment Plan. The implementation monitoring system established by the National Tuberculosis and Leprosy Program (NTLP) proves that high performance can be sustained within the public health care delivery system.

One of the key successes of the NTLP monitoring system is its emphasis on regular technical supervision in collaboration with the regional and district medical offices. This supervision provides a basis to analyze the key process and outcomes indicators against the established coverage targets, provides technical updates to staff, guides training needs, and eliminates stock-outs of tuberculosis drugs through sound stock management practices. The proposal to establish a care and treatment unit in the National AIDS Control Program and a dedicated monitoring and evaluation system, which is being developed by the Clinton Foundation in consultation with the Ministry of Health and the Tanzania Commission for AIDS, is sound and consistent with the NTLP system.

### 5.3 Qualitative Research

Demographic and Health Surveys (DHSs) in 1996 and 1999 revealed no significant positive changes in perception of risk and behavioral patterns among men and women of reproductive age, although these trends have been neither further investigated nor monitored since 1999. Furthermore, no credible national or regional quantitative data will be available before the planned 2004 DHS and national HIV surveys. The results of a behavioral surveillance survey conducted in 2001 that focused on youth have yet to be released.

Most importantly, the understanding of factors behind these trends remains general, and programs continue to be driven by assumptions and conventional wisdom that may be insufficient to effectively address the HIV/AIDS epidemic. The "Highlights of Research Activities in Tanzania" included in the HIV/AIDS/STI Surveillance Report 2001,<sup>16</sup> is symptomatic of the current research agenda. These activities focused almost exclusively on biomedical research.

Although it is critical to rely on proven interventions to address the HIV/AIDS emergency, it is equally important to expand and exploit the knowledge base for individual and group behaviors in Tanzania. Over the next ten years, the research agenda and the related institutional capacity must guide the design of culturally sensitive interventions. The research agenda should understand the Tanzanian value systems, factors that influence perceptions of HIV/AIDS, links between perception and individual decision-making, and the development of motivation theories of behavior change.

Currently, institutional capacity for qualitative/behavioral research is limited to focus group discussions both in Tanzania and in other sub-Saharan African countries (with the possible exception of South Africa). To date, no public or private Tanzanian institution has conducted comprehensive behavioral research for informed program design, development, implementation, and monitoring. No institution, with the exception of the Muhimbili

---

<sup>16</sup> National AIDS Control Programme. September 2002.

University College of Health Sciences, has the critical knowledge and skill base to pursue a research agenda using the scientific methods that are more sophisticated than focus groups.

## **5.4 Financial Resource Envelope for HIV/AIDS**

The resource environment for HIV/AIDS is changing considerably, with substantial increases in funding levels. Despite the greater finances allocated by government and development partners for HIV/AIDS activities, there is a general consensus that more transparent and effective mechanisms should be established to direct regional, district and community interventions. The establishment of the rapid funding mechanism is an important step towards the right direction.

There has been an almost twofold increase in financing for government HIV/AIDS programs in government fiscal years 2001–02 and 2002–03; the share of total government funding rose from 20 percent in 2001–02 to 33 percent in 2002–03. Tanzania also benefits from major global and other initiatives, including the following:

### ***5.4.1 The Global Fund to Fight AIDS, Tuberculosis and Malaria***

Tanzania has been awarded a first grant of \$11.9 million to fight malaria and \$5.4 for its first round HIV/AIDS proposal to the Global Fund. Additionally, Tanzania's third-round application has been approved for scaling-up access to quality VCT as an entry point to comprehensive care and support services for TB and HIV/AIDS in Tanzania Mainland through a coordinated multi-sector partnership. The total maximum budget will be \$87 million over a five-year period.

### ***5.4.2 The World Bank Multicountry AIDS Program***

The World Bank has granted \$70 million to Tanzania for HIV/AIDS activities to cover the period up to 2006, of which \$5 million is for activities in Zanzibar.

### ***5.4.3 William J. Clinton Presidential Foundation***

Tanzania is among the three African countries to receive foundation support. Support will focus on securing funding for the country's comprehensive approach to support antiretroviral treatment. Funds raised by the Clinton Foundation will be channeled primarily through government agencies and/or through "basket" funds. A total of \$539 million is being sought over a five-year period.

### ***5.4.4 The Rapid Funding Envelope***

The Rapid Funding Envelope was established by eight donor agencies and by the Tanzania Commission for AIDS as a short-term mechanism to support civil society activities in HIV/AIDS in both mainland Tanzania and Zanzibar. Throughout a 18–24 month period, the Envelope will distribute \$2–3 million in grants ranging from \$50,000 to \$200,000. Grantees include nongovernmental and community-based organizations, and some private sector operators. (RFE donors agreed to exercise the option to extend the RFE by 12 months at a Steering Committee meeting in early September 2003.)

#### ***5.4.5 Abbott Laboratories***

Abbott Laboratories will partner with the Ministry of Health to restore Muhimbili University's laboratory capacity; build an HIV center that includes a day hospital, outpatient clinic, counseling and psychosocial support facilities; create a national HIV teaching center; and introduce pharmacy, health information, and management systems. Abbott Laboratories will also enhance the laboratory capabilities of twenty hospitals throughout Tanzania, although the precise amount earmarked for this is not known.

## **6. Supportive Factors for Expanding the National Responses to HIV/AIDS**

### **6.1 Strong Donor Collaboration**

Tanzania's bilateral and multilateral AIDS partners have invested a great deal of effort in building the donor assistance committee HIV/AIDS group. This strong collaboration is exemplified by:

- The creation of the Rapid Funding Envelope for AIDS by eight donor agencies and the Tanzania Committee for AIDS (TACAIDS).
- The joint technical support provided by donors for the development of a Global Fund proposal and the TACAIDS multisector plan.

Although USAID/Tanzania does not contribute to the basket funding, the Mission has emerged a critical supporter of the sector-wide approach. The Mission has maintained sustained dialogue with the government and other donors, and has planned and allocated its technical and financial resources in accordance with government priorities and requests.

### **6.2 The William J. Clinton Presidential Foundation HIV/AIDS Initiative**

Rejecting the reasoning that viable, large-scale treatment programs are impracticable in an African setting due to perceived problems with inadequate infrastructure, the inherent complications of the treatment, and prohibitive costs for drugs, the Clinton Foundation provides a unique opportunity to anticipate the critical challenges facing such an ambitious but legitimate undertaking. As a change agent, the Clinton Foundation may provide opportunities to reengineer and strengthen the entire health delivery system in Tanzania while focusing on the most pressing challenge facing the health sector today.

USAID/Tanzania can play a critical role in partnering with the Clinton Foundation to support Tanzania's national care and treatment plan and making available its expertise and experience. These include:

- Assisting in the establishment of the care treatment unit in Ministry of Health by funding technical international experts and a mentorship program to attract qualified Tanzanians to work at regional and district levels
- Providing technical assistance in designing and implementing the certification system proposed by the plan
- Demonstrating the feasibility of an "opt-out" policy for routine pretest counseling and testing at all levels of the health delivery system
- Designing nutritional education and counseling for all patients on treatment and related mechanisms for nutritional support

- Preparing nonpublic and mission hospitals to qualify for support under the care and treatment plan, and thus cultivating a network of centers of excellence located at the district level
- Mainstreaming innovative training approaches to support the rapid improvement of quality care and treatment services

### **6.3 A Successful Tuberculosis Program**

The tuberculosis program demonstrates the possibility of success within an extensive public sector delivery system. Other programs related to immunization and family planning, notably in Uganda, have also achieved sustained and commendable results.

### **6.4 Accredited Drug Dispensing Outlet Program**

The Accredited Drug Dispensing Outlet (ADDO) program is funded by the Bill and Melinda Gates Foundation, and managed by Management Sciences for Health. The objective of the program is to establish a regulated system of profitable ADDOs to provide a range of quality drugs and professional services to underserved populations in collaboration with the Tanzanian Pharmacy Board. The drugs shops, called “duka la dawa baridi” (DLDB) are licensed only to sell over-the-counter drugs, but they sell prescription drugs as well. This initiative is relevant to the HIV/AIDS program because it will make quality drugs for treatment of opportunistic infections more accessible to rural areas and underserved populations. Tanzania has only 350 pharmacies, mostly located in main urban areas, whereas it has more than 4,000 drugs shops. This important initiative linked to other existing and planned accreditation and certification interventions will certainly contribute to building a culture of quality in Tanzania.

### **6.5 USAID/Tanzania Commitment to a Multisector Approach**

The assessment team conducted fruitful discussions with USAID/Tanzania strategic objective teams for health, democracy and governance, and economic growth. We discerned that important areas of collaboration may include mainstreaming HIV/AIDS activities in each sector to harness these networks and professional associations to deliver HIV/AIDS prevention and care interventions and to minimize the effects of HIV/AIDS epidemic.

The health strategic objective contains room for joint and mutually-supportive interventions in prevention of mother-to-child transmission; infection prevention; sexually transmitted disease case management; producing a modularized, integrated curriculum for counseling; repositioning condom promotion for dual protection purposes; and strengthening supervision and logistics systems.

It may be possible to collaborate with the democracy and governance team to mobilize a vocal citizenry and promote better accountability by decision makers for the purpose of building

institutions and to develop policies. In this respect, building the capacity of an independent media and sustaining a policy debate on critical HIV/AIDS programmatic issues will be of utmost importance.

Over the past decade, a series of successful pilot projects in “community-based conservation” have been developed in partnership with local communities. Partnering with the stakeholders engaged in community-based natural resource management, including fishermen, for example, may present appropriate entry points for mobilizing important segments of the rural population. These stakeholders have gained extensive experience in local community empowerment and poverty alleviation initiatives.<sup>17</sup>

Finally, with economic growth team, the assessment team explored options to anticipate and minimize the adverse consequences associated with the development of areas known to have high HIV transmission rates. The team discussed the possibility of targeting vulnerable rural populations, especially girls, with culturally sensitive interventions, including microfinancing. These interventions need to be carefully designed and evaluated.

## 6.6 Lessons Learned from the Mbeya Region

The German international technical agency, GTZ, has developed large-scale, sustained interventions in Mbeya, a challenging region in Tanzania in which to work. GTZ’s experience provides a range of important lessons:

- Sustained support to operations and scaling-up a core set of proven interventions driven entirely by the public sector can lead to a significant decline of HIV prevalence at the regional level.
- Complementary annual funding has proven to be relatively modest, at \$300,000 (not including one GTZ international staff and consultants), suggesting that this regional approach may have been cost-effective.
- Sustaining on-site, limited technical support by using and strengthening existing national systems are critical to fostering results-driven solutions with zonal, regional, and district Ministry of Health staff.
- Limited empowerment by communities and a poor understanding of the social environment and factors driving the epidemic may affect the ability to sustain critical results.

## 6.7 Lessons Learned from Other Countries

Tanzania has limited knowledge of the lessons other countries have learned in fighting HIV/AIDS. Exposing a critical mass of implementing organizations to successful lessons from countries such as Brazil, Senegal, Thailand, Uganda, and Zambia is urgently needed to avoid basic mistakes such as developing voluntary counseling and testing services without

---

<sup>17</sup> U.S. Agency for International Development. October 2002.

also providing follow-up counseling. Developing a specific plan to disseminate lessons and incorporating them as standards and procedures are developed are of utmost importance.

## 7. Strategy Recommendations

### 7.1 Building the Tanzanian Knowledge Base to Promote HIV/AIDS Action

An overarching goal for the next ten years likely will be to build and maintain a knowledge base that fosters and sustains a national mobilization to fight HIV/AIDS. Primary target groups to lead the development of the Tanzanian knowledge base should include:

- Health workers
- Opinion leaders and decision makers
- Managers of key public and private institutions
- People living with HIV/AIDS
- Champions in the general population

### 7.2 Building Institutional Capacity

Bridging the intellectual and implementation gap on HIV/AIDS will require that the human resource issue be addressed. USAID should endorse a comprehensive approach to human resource development that goes beyond in-service training activities to one that attends to pre-service training, performance improvement, motivation schemes, career plans, and long-term professional growth. This comprehensive approach may include:

- Concentrating on supervision systems and facilitative supervision skills
- Making functional training information management systems a critical criteria for sustained funding for training activities
- Establishing fellowships and mentorship programs linked to longer-term training or other incentives
- Supporting the institutional and technical capacity of relevant pre-service institutions

Other critical elements for building institutional capacity will include:

- Building better leadership and management systems at the operational level
- Fostering coordination and partnerships among implementing organizations
- Facilitating access to information technology
- Building Tanzania's capacity to conduct qualitative research and analysis
- Building institutional capacity to offer better care, treatment, and mitigation (including, for example, fostering linkages with the Clinton Foundation)

### 7.3 Policy Environment

Developing a supportive policy environment for good HIV prevention, care, and support activities, and addressing critical policy issues will require collaboration between government and development partners and the engagement of civil society leaders. Accordingly, it will be



important to maintain dedicated attention to donor collaboration and to sustain the dialogue with government officials.

Major collaboration objectives within the Development Assistance Committee HIV/AIDS Group should focus on sustaining harmonization results achieved to date through illustrative activities such as:

- Expanding rapid funding mechanisms to benefit implementing organizations with good track records
- Strengthening results-driven public partnerships at district and community levels
- Focusing support to the Tanzania Commission for AIDS (TACAIDS) to advocate, monitor, and evaluate the national response
- Relying on a mix of donor resources to fund and provide technical to strengthen systems and promote the organizational development of TACAIDS and other national structures

Sustained dialogue should be maintained with Government of Tanzania to:

- Support the development of good human resources policies by:
  - Establishing a monitoring system of the Tanzanian health care workforce
  - Placing appropriate attention on civil service reforms and encouraging the Tanzanian government to introduce performance incentive mechanisms in order to attract and retain competent workers
- Focus on health-related key policy issues (i.e., unfunded mandates), such as post-exposure prophylaxis, drug importation, and drug and condoms quality control
- Explore and support complementary mechanisms for timely procurement and distribution of quality drugs and supplies
- Sustain the policy debate on HIV/AIDS and foster a vocal citizenry for HIV/AIDS reforms
- Support research actions and multisectoral interventions that minimize organized and informal commercial sex work

## 7.4 Products and Services

Bridging the implementation gap will require a dramatic increase in the availability of culturally sensitive, quality services and products. Accordingly, the assessment team makes the following recommendations to USAID:

- Take advantage of the extensive existing support for antiretroviral therapy to help Tanzania scale up PMTCT-Plus and voluntary counseling and testing services.
- Establish linkages with other sectors to expand prevention, support, and mitigation service delivery.
- Support better drug and consumable logistics and management systems.
- Scale up balanced behavior change communication interventions and support dedicated interventions that:
  - Promote a delay in sexual debut and abstinence until marriage and faithfulness.
  - Target high-transmission areas and those who practice risk behaviors, such as sex workers, truckers, migrant workers, and men who have sex with men.

## Annex A

### The Global and Local Resource Environment

#### Trends in HIV/AIDS Resource Flows

Resources for HIV/AIDS are rising considerably. There has also been a shift in resource targeting as most organizations now devote a larger proportion of their resources to specific interventions such as prevention of mother-to-child transmission and better access to antiretroviral therapy, both of which particularly target people living with HIV and AIDS. This has been a cause for concern among various program implementers because it might overshadow the importance of other prevention interventions such as information, education, and communications, and behavior change communications to prevent new infections, as well as the revamping of general health care and other basic infrastructure.

#### Tanzanian Government

Tanzania has increased financing for its HIV/AIDS program by nearly twofold between fiscal years 2001–02 and 2002–03, indicating that more resources are being channeled to HIV/AIDS. Table 1 shows an increase in the share of total government funding from 20 percent in fiscal 2001–02 to 33 percent in fiscal 2002–03, which suggests the government is enlarging its role as a key contributor to HIV/AIDS program. Rigorous efforts to mobilize domestic resources have included tax reforms and other revenue enhancing measures, better budget management and accountability, and the introduction of the Public Expenditure Review, the Medium Term Expenditure Framework, and the Integrated Financial Management System.

Table 1: Government of Tanzania HIV/AIDS Programs by Source of Funds  
(2001–02 and 2002–03<sup>18</sup>)

Source of Funding	2001–02*		2002–03†	
	Amount (Shillings)	Share (%)	Amount (Shillings)	Share (%)
Government of Tanzania	2,295,562,466	20%	7,251,694,571	33%
Development partners	9,109,720,764	80%	14,693,112,036	67%
Bilateral	4,985,146,220		9,834,876,996	
<i>Multilateral</i>	4,124,574,544		4,858,235,040	
<b>Total</b>	<b>11,405,283,230</b>	<b>100%</b>	<b>21,944,806,607</b>	<b>100%</b>

\* Expenditure; † Budget allowance.

A number of shortcomings emerge when one examines this from a sectoral point of view. The resources budgeted for each sector do not seem to consider the strategic positions of some of the key sectors in the fight against HIV/AIDS in comparison to other sectors. Also, budgeted funds are disbursed late and are therefore unspent at the end of the fiscal year. The

<sup>18</sup> Directorate of Policy and Planning. January 2003.

government has increased its total share of funding for health and for HIV/AIDS in particular, but it still falls short of the World Health Organization's recommendation of expenditures of \$12 per person/per annum<sup>19</sup>

### *The Global Fund to Fight AIDS, Tuberculosis and Malaria*

Tanzania has been awarded a first grant of \$11.9 million to fight malaria and \$5.4 for the first round of its HIV/AIDS proposal. Its round three proposal was recently approved as well for over \$85 million for linking treatment of AIDS and TB. This will cover activities that focus on education, district responses, and AIDS prevention activities in the informal sector.

### *The World Bank Multicountry AIDS Program*

The World Bank recently approved \$500 million in financing for the second stage of its Multi-Country AIDS Program in Africa; Tanzania can use a \$70 million grant to cover activities up to 2006, and \$5 million is dedicated for activities in Zanzibar. For Tanzania mainland, the grant will finance three main components; a civil society fund, a public multisector fund; and institutional support to the Tanzania Commission for AIDS.

### *The William J. Clinton Presidential Foundation*

Tanzania is among three African countries to receive support from the Foundation. Support will focus on raising funds to support Tanzania's comprehensive approach to antiretroviral treatment and will be channeled primarily through government agencies and basket funds as appropriate. Activities under this initiative will cover voluntary counseling and testing and prevention of mother-to-child prevention activities in all maternal and child health clinics, routine counseling and testing within the health care system, and provide a link between tuberculosis and clinics that provide treatment for sexually transmitted infections. It will involve the creation of a care and treatment unit at the National AIDS Control Program with a long-term goal of providing training in the basics of antiretroviral therapy and care and treatment for persons living with HIV/AIDS to all health care personnel. A total of \$539,000 has been earmarked for this initiative over a five-year period.

### *The Rapid Funding Envelope*

The Rapid Funding Envelope was established by eight donors as a short-term mechanism to support civil society activities in HIV/AIDS in both mainland Tanzania and Zanzibar. Throughout its lifetime that has been designed to last 18–24 months, the Envelope will distribute \$2–3 million in grants ranging from \$50,000 to \$200,000. Grantees include implementing agencies that comprise nongovernmental and community-based organizations, and some private sector operators.

### *Corporate Contributions: Abbott Laboratories*

Abbott Laboratories' "Step Forward" program was developed to address the needs of AIDS orphans and vulnerable children focuses on health care, counseling and testing, basic assistance, and education. The project is currently active in Burkina Faso, India, Romania, and Tanzania.

---

<sup>19</sup> International Monetary Fund and The International Development Association. November 1, 2002.

Over the next five years, Abbott Laboratories will partner with the Ministry of Health to restore Muhimbili University's laboratory capacity; build an HIV center that includes a day hospital, outpatient clinic, counseling and psychosocial support facilities; create a national HIV teaching center; and introduce pharmacy, health information, and management systems. Abbott Laboratories will also enhance the laboratory capabilities of twenty hospitals throughout Tanzania. The precise figure earmarked for this is not known but it is substantial.

## Key Observations, Constraints, and Recommendations

In order to make a case for the most judicious ways to spend available funding, accurate information is needed on the cost-effectiveness of activities and interventions being implemented, as well as a focus on the success achieved and the lessons that have been learned so far. USAID's effort to strive for "speed, scale, and results" that are directly attributable to greater investments could benefit from the following observations and recommendations:

- ❑ A lot has been done to put in place the required structures and systems to implement a coordinated national response and there is a strong political will among top government leaders to spearhead the fight against HIV/AIDS. However, the government's commitment needs to be translated into action through the allocation of appropriate budgetary resources to execute an effective HIV/AIDS program across all the sectors at different levels of government. The major share of the total budget available for HIV/AIDS is still provided by development partners and there is no backup plan to sustain the various initiatives.
- ❑ There is a general lack of capacity to plan, budget, and account for funds allocated for HIV/AIDS activities. In fiscal 2001–02, 65 percent of the money channeled through TACAIDS was unspent.<sup>20</sup> Several measures can be taken to address this situation. These include targeting recipients who have proven implementation capacity (e.g., mission hospitals); building the institutional capacity of public and other private sector institutions to enable them to access and account for HIV/AIDS funds; and expanding and replicating funding mechanisms that are quick and effective (e.g., the Rapid Funding Envelope). The main goal is to ensure that available resources are used to make a difference within the shortest possible time frame.
- ❑ Data are generally lacking on specific allocations of resources. This makes it difficult to identify funding gaps and to make decisions on priority interventions. A more comprehensive and coordinated system between the different government ministries and departments involved in the planning and financing process is needed, including TACAIDS, the Ministry of Finance, and the Regional Administration and Local Government division of the President's Office. This would assist in monitoring HIV/AIDS resources and expenditures across sectors and facilitate more effective priority-setting in relation to resource allocation and in regard to specific interventions. TACAIDS needs the capacity to play this role.

---

<sup>20</sup> Public Expenditure Review Report. January 2003.

- ❑ Because the National Multisectoral Framework has been approved to oversee implementation of HIV/AIDS activities in Tanzania, there is need to ensure that sector-specific medium-term expenditure frameworks correspond to the NMSF in order to prioritize interventions and measure achievement of overall objectives and the effects of specific interventions in relation to resources allocated.
- ❑ Finally, to respond to the need for greater effect, sustainability, scale, and cost-effectiveness, the cost of different HIV/AIDS interventions should be analyzed and programmatic responses identified to reduce these costs.

## **Conclusion**

Despite a significant increase in resources for HIV/AIDS interventions, efforts to generate funding for interventions at national and local levels must not be relaxed. Development partners should continue to be flexible and more inclusive, to ensure they match their support to the national priorities and efforts. The government, on the other hand, must accept responsibility by placing itself in the front line defense against the pandemic. Regardless of the amount the World Bank and collateral donors may provide in aid, it cannot substitute for the efforts of a committed government supported by a citizenry empowered with awareness and acting against a looming threat to their survival. All resources and competencies must be fused, and the fight against AIDS regarded as everybody's war. HIV/AIDS is a national disaster and it must be treated as such.

## Annex B

### Quality Systems: Ministry of Health and USAID/Tanzania

#### Background

The Tanzania Ministry of Health (MOH) has stated a strong strategic interest in improving the quality of medical services. To this end, the Health Services Inspectorate Unit (HSIU) has been established under the direct supervision of the office of the Chief Medical Officer. In addition the MOH's Second Health Sector Strategic Plan (July 2003–June 2006) is focused on “reforms towards delivering quality health services and client satisfaction.”

The HSIU has divided its activities into two phases: “First is documentation of examples, experiences and lessons, from initiatives in Tanzania and elsewhere, which can be a source of inspiration and input to the process of developing the system. The second phase will be the development of a national system for quality improvement in health care.” The first phase was completed in May 2003, whereas the second phase is still being coordinated.

The stated objectives and responsibilities of the HSIU include:

- Formulating policy, guidelines, and standards for provision of health services
- Coordinating and monitoring implementation of the guidelines with aiming at quality improvement
- Ensuring the integration of health care services by liaising with partners and other stakeholders with interest in matters pertaining to delivery of health care services
- Inspection and supervision of health care services

To date, the MOH has published a number of guidelines and policies affecting such diverse entities as health boards, referral hospitals, district health systems, nursing, pharmacy standards, and facility supervision. Additionally, the role of capacity building and training has been vested in the zonal training centers. The zonal training centers are envisioned as “arms of the MOH ... charged with the responsibility of training and offering continuing education to health workers in their respective zones with particular emphasis on capacity building for Council Health Management Teams.” But as of this assessment, national plans for policy formulation, dissemination, and systems of compliance have yet to be drawn up. At this time, no systematic mechanisms for quality assurance are in place to address the diverse needs of a coordinated and functioning national healthcare system.

Quality improvement is an important component of USAID/Tanzania's public sector health program. USAID has supported a three-region quality improvement initiative together with the MOH's Office of Reproductive Child Health (RCH). The initiative focuses on improvement over a range of services including antenatal clinics, child care/immunization, natal and postnatal care, family planning, and infection prevention. The effort is focused not only at improving services through training of health personnel but also at improving demand for quality RCH services. The USAID/Tanzania “RCHS and ID Strategy Recommendations

(2004–2114)” reported that the program “suffers from difficulties of coordination among four technical assistance partners who do not have a permanent presence in Tanzania.”

Additionally, the report suggested that the “positioning of QA [quality assurance] in RCHS might hamper future expansion towards a holistic QA approach.”

Consistent with its declared importance of quality assurance, the MOH has delegated the supervision of the activities of HSIU to the CMO’s office. In our conversations with the CMO, Dr. Upunda, we were told that he expected a coherent national quality framework to come forth from the HSIU shortly. Such a framework should be poised to meet the needs of the health delivery system as donor funds for HIV care and treatment are being secured. Yet, by admission of the director of the HSIU, Dr. Ngonyani, at present, the unit’s progress is encumbered by a lack of adequate staff (presently consisting of himself and a nurse trainer) and funding. The technical support needs and need for middle level personnel are striking if the Unit is to play a real role in advancing the quality of care of HIV/AIDS services.

Given the role of the MOH post decentralization and health sector reforms, USAID would have a strategic entry point into improving the quality of health services in Tanzania by supporting the HSIU in the development of its national quality framework. Additionally, to realize the implementation of the quality framework that will be drawn up, technical assistance for the establishment of quality programs will need to be provided at the district level where much of the funding for services are poised to be targeted.

### **Overview of Quality Systems that Must Be Instituted to Meet the Needs of Delivering a Continuum of Programs for HIV/AIDS Treatment and Care**

Essential elements of a program that the MOH must activate in order to institutionalize quality within its healthcare system are: 1) an enabling policy environment; 2) systems of accreditation and oversight; and 3) systems that support the development of capacity within the ranks of its health personnel. All three of these elements are activities that the USAID mission here in Tanzania has had experience tackling at various times over the course of its work with the health sector. Technical and financial assistance from USAID/Tanzania at a systems level would most certainly have a tremendous impact in ensuring the success of the diverse activities that will be undertaken to address the HIV epidemic in Tanzania over the next few years.

#### ***Internal Enabling Environment (MOH/HSIU/NACP/Civil Service Department/TACAIDS)***

National policies affecting the quality of HIV/AIDS care and treatment must be set by national institutions in order to direct and reinforce quality of care. The Mission has been instrumental in the establishment of TACAIDS and in developing its ability to play a pivotal role in forming national HIV policy. A healthy debate between the diverse national institutions around selected issues listed below would ensure a policy environment closer to one that can be described as “enabling.”

Below is a short list of specific health systems issues that require national debate and decision-making before a policy environment that supports quality services can be said to exist in Tanzania:

1. Human resources
  - Quantity of staff (hiring, retrenchment, development of new staff)
  - Quality of staff (pre-service and in-service, continued learning)
  - Career advancement (rewards/remuneration, staff rotation vs. dedicated teams, staff HIV status, advocating for staff needs)
  - Instilling core values that emphasize respect, quality, and continued improvement in levels of perform
2. National accreditation standards and systems for centers at which HIV/AIDS prevention, care, treatment, and support will take place
3. Infection prevention standards as the norm in health facilities
4. Appropriate resource allocation to ensure availability of drugs and consumables related to care, treatment, and support
5. Client-oriented service delivery systems in which health worker stigma toward patients with HIV/AIDS is markedly reduced or eliminated

Each of these issues was seen to be a major hurdle to success within the healthcare delivery system in Tanzania. Until policies are made at a national level to address these vital issues and the policies are then translated into standards that are upheld at regional, district, and local levels, all attempts at advancing the care of HIV/AIDS patients in Tanzania will fall short of their mark.

***Organizing for Quality (Initiated at the National Level, Implemented at Regional/District/Local Levels)***

To implement policies set at the national level, various institutions must be established and/or strengthened so that national policies regarding HIV care can be enforced. Responsibility for oversight of the quality assurance program must be mapped out carefully so that adequate coordination, accountability, and implementation of quality care can be a reality.

***Institutions of Accreditation.*** Ministry of Health/HSIU/NACP must establish and disseminate policies that will set up and impart authority to healthcare institutions for certification and accreditation of these institutions and individuals participating in the continuum of care (Table 2). There is a danger that with the influx of antiretrovirals anyone with access to the drugs can sell or prescribe the drugs without a proper mechanism for follow-up and monitoring. In order to prevent the promotion of misinformation and to reduce the possibility of drug resistant strains of HIV a strict mechanism of accreditation and oversight of participating institutions will be necessary.

***Institutions for Oversight.*** Ministry of Health/HSIU/NACP must develop and disseminate policies and tools to establish and/or strengthen supervisory authority and capacity within the existing decentralized health system. The offices of the RMO, DMO, and hospital medical officers in-charge should ensure compliance with national standards within their spheres of



influence. This oversight should address all the diverse components of service along the HIV care continuum:

- Preventive services
- MSD (drugs and consumables logistics, drug security)
- Voluntary counseling and testing
- ANC/PMTCT/PMTCT Plus
- Treatment
- Nutrition
- Counseling and support

Presently the inability to identify systems weaknesses and address them in a timely fashion has permitted many service points (from counseling services to pharmacies to hospitals) to be engaged in providing poor quality services. Major strides must be made to correct this critical area of service delivery.

Table 2. Institutions that may need to be strengthened or established in order to permit accreditation, certification, and oversight of a diverse cadre of health providers and institutions

<b>Potential Institutions of Accreditation/Certification/Oversight</b>	<b>Cadres in Need of Accreditation in HIV/AIDS Care</b>	<b>Institutions/Services in Need of Accreditation/Certification/Oversight</b>
MOH/HSIU/NACP	Physicians	Medical training programs
MSD	Nurses	Nursing training programs
Medical council	Lab technicians	Supportive services training programs
Nursing council	Pharmacists	Pharmacies
Laboratory board	Nutritionists	Counseling and preventive services
Pharmacy board	Equipment technicians	ANC/PMTCT/PMTCT Plus services
HSIU	Data collectors and analysts	Treatment programs/centers
Medical, nursing and technical colleges	Counselors	Care and support services
Counseling programs	Assistant medical officers	Nutrition counseling and distribution centers
Zonal training centers	Clinical officers	Community and faith-based organizations

### ***Support Functions to Achieve Quality of Care in HIV/AIDS Services***

Support functions will need to be strengthened at both the central (national) level and the decentralized (regional/zonal) levels. These functions consist of capacity building (training, supervision, coaching); tracking and communicating successes and challenges in achieving quality care; and rewarding quality care.

**Capacity Building.** Pre-service and in-service education in both clinical and management training should be set up to train providers in the basics of HIV/AIDS care and treatment and management of health systems:

- Clinical programs for certification and training of all cadres
  - i. Technical training
  - ii. Practical training
- Management programs
  - i. Logistics and resource management
  - ii. Management and supervision of personnel
- Training venues
  - i. Pre-training centers: schools for medicine, nursing and ancillary care providers
  - ii. Zonal training centers
  - iii. On-site in-service programs (for continuing education)
  - iv. Centers for training programs for supportive technical staff (lab technicians, maintenance personnel, etc.)

The human resource demands on the health education system will be staggering once the various proposals being funded by the William J. Clinton Presidential Foundation, the Global Fund to Fight AIDS, Tuberculosis and Malaria, and others are put into place. The capacity of educational/training centers must be developed so that larger numbers of medical, nursing, and supportive technical graduates can be put through pre-service programs over the next few years. Additionally the needs of staff already in the field and who have not had any updates or in-services in years need to be addressed. Many health providers in the field complain of a lack of access to training beyond their date of graduation. Many admit to a lack of adequate knowledge about HIV/AIDS treatment and care.

The MOH has designated zonal training centers responsible for the development of training programs for the community health management teams in health planning and management. In our assessment we noted that these centers have the basic structure on which the additional role of serving as venues for continued medical training in clinical care can be placed. At times, clinical courses such as a recent course in the symptomatic management of sexually transmitted infections are conducted. But some of the zonal training center tutors we spoke with believed they were not clinically up-to-date and did not feel comfortable teaching courses in HIV care and treatment. When it was suggested that in-country or foreign medical experts could be brought in to conduct the training courses at the zonal training centers, they were receptive to the idea.

Presently, there are six zonal training centers of varying capacity. Two of the six centers (Arusha and Mbeya) are considered to function well, according to the Ministry of Health. Generally, zonal training centers have adequate facilities (classroom space, kitchens, and accommodations) to conduct courses for 60 or so resident students at a time. The CMO plans to increase the number functional zonal training centers to eight in order to cover the continuing education needs of the entire country. Technical and financial support directed at these centers would assist greatly in providing a mechanism for updating the present knowledge base of the health care providers in the country.

*Challenges and Successes in Implementing Quality Programs and Rewarding Quality Care.*

Various other aspects of the system should also be subject to monitoring and evaluation at the district and local levels. Challenges and successes within each participating program in the continuum must be studied so that networks of excellence can be established based on best practices in HIV/AIDS care in Tanzania:

- Access to the continuum of services in each region
- Linkage of services/continuity of care across services (antenatal clinics, voluntary counseling and testing, sexually transmitted infections, National Tuberculosis and Leprosy Program, HIV treatment and care, and nutrition information)
- Quality of service providers: minimum standards for workload, staffing, training (along the care continuum)
- Quality of services: enforcement of standards of care and treatment (across the continuum of services)
- Financial accountability (oversight into management of funds)
- Inventory management (logistics: quality and availability of drugs and consumables)
- National medical record system, patient information systems, and continuity of care

In each of these areas, input, process, and outcome indicators should be tracked both internally (within the institutions being evaluated) and externally (by higher-level institutions). For this purpose, a management information system must be established at the national level by a national agency (such as the NACP), but the data collection and entry must be implemented at the district level. Such a system can provide performance data based on USAID-designated core indicators (e.g., behavior, voluntary counseling and testing, and prevention of mother-to-child transmission).

At the district level, an electronic means for compiling and transfer of the data (e.g., supervisory assessments, self-assessments, quality monitoring, periodic audits) should be established. HSIU has noted that the health management information system is “weak, understaffed, lacks comprehensiveness...reports data late...does not provide specialized data...lacks comprehensiveness.” Therefore, MOH has set up dedicated systems for programs such as the TBLP and the National AIDS Control Program’s sentinel site antenatal clinic HIV prevalence study. Such a system may well be the best mechanism for monitoring and evaluation data collection until the health management information system is viable. A national training program in data collection, analysis, and utilization should be made a part of the management training at the zonal training centers so that the value of the data being collected is clear to those being asked to do the data collection.

Finally, national surveys and operations research investigating the impact of particular interventions or pilot programs also need to be conducted in order to assess the impact of these activities. USAID’s support for the Demographic and Health Survey and the Tanzania Health Indicator Survey provides invaluable data on the effects of national programs and should be continued.

## Annex C

### Bibliography

- AIDS Orphans Grant Fund. [Excerpts from Assessment Report, 2002/3?].
- Bureau of Statistics. 1997. *Demographic and Health Survey 1996*. Calverton, Md.: Bureau of Statistics [Tanzania] and Macro International Inc.
- Bureau of Statistics. 1997. *Reproductive and Child Health Survey 1996*. Calverton, Md.: Bureau of Statistics [Tanzania] and Macro International Inc.
- Bureau of Statistics. 1996. *Service Availability Survey, 1996*. Dar es Salaam: Bureau of Statistics.
- Bureau of Statistics. 1995. *Knowledge, Attitudes and Practices Survey 1994*. Dar es Salaam: Bureau of Statistics [Tanzania] and Macro International Inc.
- Bureau of Statistics and Macro International. 1993. *Demographic and Health Survey 1991/1992*. Calverton, Md.: Bureau of Statistics [Tanzania] and Macro International Inc.
- Deutsche Gesellschaft für Technische Zusammenarbeit GmbH (GTZ). *Awareness and knowledge of mother-to-child transmission of HIV and preventive measures in Mbeya Region, Tanzania*. Dar es Salaam: GTZ.
- Directorate of Policy and Planning. January 2003. *Public Expenditure Review, Health Sector Update*. Dar es Salaam: Ministry of Health.
- Directorate of Policy and Planning. May 2002. *Public Expenditure Review, Health Sector Update for 2002. Final Report*. Dar es Salaam: Ministry of Health.
- Family Health International. December 2002. *Overview of Community Home-Based Care Services for People Living with HIV/AIDS and Other Chronic Illnesses in Tanzania*. Dar es Salaam: U.S. Agency for International Development.
- Family Health International/IMPACT. December 2002. *Sustainable Home-Based, Hospice/Ambulatory HIV or Chronic Illness Care in Sub-Saharan Africa*. Dar es Salaam: U.S. Agency for International Development.
- Hamm, Tiffany E. June 2003. *Site Evaluation: UM/WRP-MMRP and Mbeya Region, June 3-13, 2003*.
- Health Research for Action. March 2003. *Technical review of health service delivery at the district level. (Independent technical review on behalf of the Ministry of Health, the President's Office, Regional and Local Government, and the Government of Tanzania.) Final Report*. Dar es Salaam: Health Research for Action.
- Hemrich, G. and Bettina Schneider. N.d. *HIV/AIDS Prevention and Control in Developing Countries: HIV/AIDS as a cross-sectoral issue for technical cooperation. Focus on agriculture and rural development*. Dar es Salaam: Deutsche Gesellschaft für Technische Zusammenarbeit GmbH.

- Humplick, B.J. (for The POLICY Project). 2003. *USAID/Tanzania Health and Population Office Annual Planning Meeting, February 4–6, 2003. Sea Cliff Hotel*. Dar es Salaam: Training Resource Group.
- International Monetary Fund and The International Development Association. November 1, 2002. *Tanzania: Poverty Reduction Strategy Paper—Progress Report; Joint Staff Assessment*. Washington, DC: International Monetary Fund and The International Development Association.
- International Monetary Fund and The International Development Association. October 2000. *Tanzania: Poverty Reduction Strategy Paper—Progress Report; Joint Staff Assessment*. Washington, DC: International Monetary Fund and The International Development Association.
- Jamhuri ya Muungano wa Tanzania. Ofisi ya Rais Tawala za Mikoa na Serikali za Mitaa. Taarifa ya Utekelezaji ya Mwaka (January–December 2002). Idara ya Afya Mkoa wa Iringa. Ofisi ya Mkuu wa Mkoa Idara ya Afya. S.L.P. 260 Iringa. (Annual Report of Regional Medical Office).
- Jordan-Harder, B., Y.A. Koshuma, C. Pervihac, and U. Vogel. *Hope for Tanzania, Lessons Learned from a Decade of Comparative AIDS Control in Mbeya Region. Part I: Experiences and Achievements*. Dar es Salaam: Deutsche Gesellschaft für Technische Zusammenarbeit GmbH.
- Management Sciences for Health. January 2002. *District Capacity Assessment, Detailed Data Analysis Report*. Dar es Salaam: Management Sciences for Health and Health Scope Tanzania Ltd. (Prepared for TACAIDS).
- Mbeya Cement Company Limited. N.d. *Policy for HIV/AIDS*.
- Ministry of Education and Culture. August 2003. *The Education Sector HIV/AIDS Strategic Plan, 2003–2007 (draft)*. Dar es Salaam: Ministry of Education and Culture.
- Ministry of Health. April 2003. *Second Health Sector Strategic Plan (HSSP) (July 2003–June 2006): Reforms towards delivering quality health services and clients satisfaction*. Dar es Salaam: Ministry of Health.
- Ministry of Health. February 2003. *Health Sector HIV/AIDS Strategy for Tanzania*. Dar es Salaam: Ministry of Health.
- Ministry of Health. January 2003. *HIV/AIDS Strategy for Tanzania 2003–2006*. Dar es Salaam: Ministry of Health.
- Ministry of Health. October 2002. *National Health Policy*. Dar es Salaam: Ministry of Health.
- Ministry of Health. April 2002. *National Guidelines for Clinical Management of HIV/AIDS*. Dar es Salaam: Ministry of Health.
- Ministry of Health. N.d. *Hope for Tanzania: Lessons Learned from a Decade of Comprehensive AIDS Control in Mbeya Region. Part II: Guide for HIV/AIDS/STD Interventions in a District of*

- Sub-Saharan Africa (Examples from Mbeya Region)*. Dar es Salaam: Deutsche Gesellschaft für Technische Zusammenarbeit GmbH.
- Mpangile, G., N.P. Harris, J. Pielemeier, and T. van der Heijden. July 30, 2003. *Reproductive Health, Child Survival and Infections Diseases Strategy Recommendations for 2004–2014. First draft report*. Dar es Salaam: U.S. Agency for International Development.
- Msambichaka, L.A., G.D. Mjema, and D.P. Mushi. N.d. *Assessment of the Impact of Exemptions and Waivers on Cost Sharing Revenue Collection in Public Health Services*. Dar es Salaam: Ministry of Health.
- National AIDS Control Programme, Bureau of Statistics, and Ministry of Planning. N.d. *AIDS in Africa During the Nineties: Tanzania, a review and analysis of surveys and research studies*. Dar es Salaam: Ministry of Health.
- National AIDS Control Programme. N.d. *Surveillance of HIV and Syphilis Among Antenatal Clinic Enrollees 2001–2002*. Dar es Salaam: Ministry of Health.
- National AIDS Control Programme. N.d. *HIV/AIDS/STI Surveillance Report, January–December 2001. Report No. 16*. Dar es Salaam: Ministry of Health.
- National AIDS Control Programme. September 2002. *Formulation of Health Sector, HIV/AIDS/STIs, 2003–2005. Summary of Situation Analysis*. Dar es Salaam: Ministry of Health.
- National Bureau of Statistics. January 2003. *2002 Population and Housing Census General Report. (Tanzanian Census, August 24–September 4, 2002.)* Dar es Salaam: Central Census Office.
- National Bureau of Statistics. July 2002. *Household Budget Survey 2000/I*. Dar es Salaam: National Bureau of Statistics.
- National Bureau of Statistics. 2000. *Tanzania Reproductive and Child Health Facility Survey, 1999*. Dar es Salaam: National Bureau of Statistics and MEASURE Evaluation.
- Ndugulile, F., Adeline Kimambo, and Calista Simbakalia. November 2002. *Assessment of Policy Environment for HIV/AIDS in Tanzania*. Dar es Salaam: The Futures Group International in collaboration with Research Triangle Institute and The Centre for Development and Population Activities.
- Ntabaye, M., Adeline Kimambo, and Calista Simbakalia (with B. Jordan–Hadrer, Y.A. Koshuma, C. Pervihac, and U. Vogel). September 2002. *Report on the Assessment of the Policy Environment for Reproductive and Child Health for in Tanzania*. Dar es Salaam: The Futures Group International in collaboration with Research Triangle Institute and The Centre for Development and Population Activities.
- Nzioka, Charles, Ave Maria Semakafu, Walter Mbunda, and David Kihwele. December 2002. *East and Southern Africa Regional HIV/AIDS Training Needs Assessment*.
- The Global Fund to Fight AIDS, Tuberculosis and Malaria. July 2002. *Proposal Form*. Geneva, Switzerland: The Global Fund to Fight AIDS, Tuberculosis and Malaria.

- Rwebangira, M.K., and Maria Tungaraza. January 2003. *Review and Assessment of Laws Affecting HIV/AIDS In Tanzania. May–December 2002. Working draft, April 23, 2003 (interim revisions, intergovernmental workshop draft)*. Dar es Salaam: Tanzania Women Lawyers Association.
- Schueller, J., S. La Vake, W. Lugoe, M. Chuma, F. Mango, and J.B. Humplick. January 2003. *YouthNet Program Assessment Report for Tanzania*. Dar es Salaam: U.S. Agency for International Development.
- Tanzania Commission for HIV/AIDS. January 2003. *National Multi-Sector Strategic Framework on HIV/AIDS 2003–2007*. Dar es Salaam: The Prime Minister’s Office.
- Tanzania Joint Health Technical Review. February 2002. *Final Report HIV/AIDS*.
- Tarimo, E., D. Simba, and M. Ntabaye. May 2003. *Towards a National Quality Framework: Experiences and Lessons*.
- U.S. Agency for International Development. August 2003. *HIV/AIDS Strategy 2003–2005*. Dar es Salaam: USAID/Tanzania.
- U.S. Agency for International Development. June 2, 2003. *Country Strategy Plan 2005–2014. Concept Paper*. Dar es Salaam: USAID/Tanzania.
- U.S. Agency for International Development. January 2003. *An Overview of USAID Support to the Zanzibar NGO Cluster (ZANGOC) for HIV/AIDS/STI Prevention and Control*. Dar es salaam: USAID/Tanzania.
- U.S. Agency for International Development. December 2002. *Overview of Community Home-Based Care Services for People Living with HIV/AIDS and Other Chronic Illnesses in Tanzania*. Dar es Salaam: USAID/Tanzania.
- U.S. Agency for International Development. October 2002. *Assessment of Community-Based Natural Resource Management in Tanzania, Final Report*. Washington: USAID/Africa Bureau, Office of Sustainable Development.
- U.S. Agency for International Development. 2002. *[Proceedings off] the Fourth USAID/Tanzania Partner’s Strategy Meeting. Held at the Sea Cliff Hotel, Dar es Salaam, Tanzania, 26–28 February 2002*. Dar es Salaam: USAID/Tanzania.
- United Republic of Tanzania. August 25, 2003. *HIV/AIDS Care & Treatment Plan 2003–2008. Business Plan 4.0*. Dar es Salaam: The William J. Clinton Presidential Foundation and United Republic of Tanzania.
- United Republic of Tanzania. July 24, 2003. *HIV/AIDS Care and Treatment 2003–2008, Business Plan 1.0*. Dar es Salaam: The William J. Clinton Presidential Foundation and United Republic of Tanzania.
- United Republic of Tanzania. December 2001. *Poverty Monitoring Master Plan*. Dar es Salaam.

United Republic of Tanzania. November 2001. *National Policy on HIV/AIDS*. Dar es Salaam: The Prime Minister's Office.

Wizara Ya Afya Hospitali Ya Rufaa Ya Mbeya Taarifa Ya Mwaka 2002. Hospitali Ya Rufaa, S.L.P 419, Mbeya. (Annual Report, Mbeya Referral Hospital.)



## **Annex D**

### **People Interviewed**

#### **Dar es Salam**

##### *USAID/Tanzania*

John Dunlop, Team Leader (0744335310)  
Liz Loughan  
Patrick Swai (0741 333661)  
Vicky Chuwa (2668490)  
Michael Mushi, Project Management Specialist  
Tom McAndrews, Private Enterprise Officer  
Sean Hall, Democracy and Governance Team Leader (2668490)  
Maggie Hiza  
John Hatch, EGAT/ISD WDC (266 8490)  
Dan Craun-Selka (2600305)

##### *USAID Partners*

Barry Chovitz  
JSI, Deliver (MOH, DHS, Pharmaceutical Supplies Unit)  
0741 486691  
[barry\\_chovitz@jsi.com](mailto:barry_chovitz@jsi.com)

Binagwa, F.A.  
CARE  
0744 408168  
[fbilagwa@care.or.tz](mailto:fbilagwa@care.or.tz)

Vanessa Williams  
Africare  
0744 278599  
[africare@cats-net.com](mailto:africare@cats-net.com)

Deo Ng'wanansabi  
Population Services International  
[Deo@psi.or.tz](mailto:Deo@psi.or.tz)  
2151581-3

Gasto Lyaruu  
0748 686234  
[glyaruu@psi.org.tz](mailto:glyaruu@psi.org.tz)

Annefrida Kisesa  
0744 274037  
[annek@amreftz.org](mailto:annek@amreftz.org)

Justin Nguma  
Healthscope  
0744 326363  
[Jnguma@healthscope.co.or](mailto:Jnguma@healthscope.co.or)

Sylvester Ngallaba, President's Office  
0744 290803  
[ngallaba@yahoo.com](mailto:ngallaba@yahoo.com)

Bennett Fimbo, NACP  
0744 329829  
[benfimbo@nacptz.org](mailto:benfimbo@nacptz.org)

Samson Kironde  
AXIOS Foundation  
+256 77 208247  
[kirondes@axiosint.com](mailto:kirondes@axiosint.com)

Hores Isaack Msaky  
213 7542/ 7843-6  
[isaackh@axiosfoundation.org](mailto:isaackh@axiosfoundation.org)

N.G. Simkoko, MD  
National TB and Leprosy Program (MOH)  
0741- 449585  
[ngideon2002@yahoo.com](mailto:ngideon2002@yahoo.com)

Klint Nyamuryekung'e  
World Health Organization  
0744 399132  
[kunge@who.or.tz](mailto:kunge@who.or.tz)

C. Brigid Corrigan, MD  
PASAD  
0741 334302  
[brigide@intafrika](mailto:brigide@intafrika)

Stella Chale  
Muhimbili National Hospital  
0744 823682  
[schale@muchs.ac.tz](mailto:schale@muchs.ac.tz)

Muhammad Bakari  
Muhimbili University College of Health Sciences  
0744 387328  
[mbakari@muchs.ac.tz](mailto:mbakari@muchs.ac.tz)

Mary Materu, Nutritionist, Executive Director  
The Centre for Counseling, Nutrition and Health Care (COUNSENUTH)  
0744 279145  
[materu@ud.co.tz](mailto:materu@ud.co.tz)  
[marymateru@hotmail.com](mailto:marymateru@hotmail.com)

Dr. Kaushik, MD  
Shree Hindu Mandal Hospital  
022 211 4991-4  
[hindu@cats-net.com](mailto:hindu@cats-net.com)

Chalamilla Guerino, MD, STD and skin specialist  
Infectious Disease Centre—IDC  
022 2137540  
0748 600700  
[chalamilla@hotmail.com](mailto:chalamilla@hotmail.com)  
[idc@muchs.ac.tz](mailto:idc@muchs.ac.tz)

Michiko Tajima  
Japan International Cooperation Agency  
0741 320628  
[mogino@usa.net](mailto:mogino@usa.net)

Dr. Somi, Head, Epidemiology Unit  
NACP, Surveillance  
0741 224042  
[g\\_somi@yahoo.co.uk](mailto:g_somi@yahoo.co.uk)

Mr. Rubona, Acting Chief, HMIS  
MOH, HMIS  
0744 095817

Dr. H. Ngonyani  
MOH, HSIU (QI/IP)  
[Hmgonyani2002@yahoo.com](mailto:Hmgonyani2002@yahoo.com)

Zebina Msumi  
NACP  
[nacp@raha.com](mailto:nacp@raha.com)

Jessie Mbwambo  
Muhimbili University College of Health Sciences  
[jmbwambo@intafrica.com](mailto:jmbwambo@intafrica.com)  
0744 339747

Minou Fuglesang, Project Coordinator  
HIV Multimedia Initiative  
[Femina-hip@raha.com](mailto:Femina-hip@raha.com)

Francis Oleche, Research Coordinator  
AMREF  
[Franciso@amref2.org](mailto:Franciso@amref2.org)  
0744 859137

Rockwell Griffen  
Population Services International  
[rgriffen@raha.com](mailto:rgriffen@raha.com)  
0741 470864

Deo Ng'wanansabi  
Population Services International  
[Deo@psi.or.tz](mailto:Deo@psi.or.tz)  
2151581-3

Dr. A. Hokororo  
Tanzania Episcopal Conference  
0741 332656  
[tec@cats-net.com](mailto:tec@cats-net.com)

Sheikh Chizenga  
National Muslim Council  
0741 280653  
[dyomboka@yahoo.com](mailto:dyomboka@yahoo.com)

Rev. Jacob Kahemele  
Christian Council of Tanzania  
0744 564557  
[kahemele@hotmail.com](mailto:kahemele@hotmail.com)  
[cct-gs@do.ucc.co.tz](mailto:cct-gs@do.ucc.co.tz)

Agnes Christopher  
Tanzania Network of Organizations of People Living with AIDS  
0744 446074

Dr. Pasiens Mapunda  
WAMATA  
0744 381569

Joseph B. Katto  
Service Health and Development for People Living with AIDS (SHDEPHA+)  
2181849/50  
0741 224883  
[shdepha3@yahoo.com](mailto:shdepha3@yahoo.com)

Dr. Michael Burke  
Anglican Church of Tanzania  
0744 489140

Marily Knieriemen  
Peace Corps Country Director  
022 266 7172  
[mknieriemen@tz.peacecorps.gov](mailto:mknieriemen@tz.peacecorps.gov)

William Mfuko, Senior Technical Advisor  
Management Sciences for Health/SEAM Project  
0748 202235  
[wmfuko@msh.org](mailto:wmfuko@msh.org)

Thomas Layloff, Principal Program Associate  
Pharmaceutical Quality Center for Pharmaceutical Management  
022 213 6415  
[tlayloff@msh.org](mailto:tlayloff@msh.org)

Ned Heltzer, Principal Program Associate  
Center for Pharmaceutical Management  
703 524 6575  
[nheltzer@msh.org](mailto:nheltzer@msh.org)

Keith Johnson, Deputy Director  
Program Administration, Information, and Coordination  
Director, SEAM Program  
703 524 6575  
[kjohnson@msh.org](mailto:kjohnson@msh.org)

Dr. Adeline Kimambo, MD  
Tanzania Public Health Association, TACAIDS  
0744 304267  
[tpha@muchs.ac.tz](mailto:tpha@muchs.ac.tz)  
[aikimambo@hotmail.com](mailto:aikimambo@hotmail.com)

Henry Kuria, Grants Manager  
CARE International  
022 2666471  
[hkuria@care.or.tz](mailto:hkuria@care.or.tz)  
[care-tzhq@care.or.tz](mailto:care-tzhq@care.or.tz)

Sheikh Hassan Chizenga  
Secretary of Ulamaa Council  
National Muslim Council of Tanzania (BAKWATA)  
Commissioner, TACAIDS  
Chairman, BAKWATA AIDS Project  
022 211 2899  
0744 280 653  
[sheikhchizenga@yahoo.com](mailto:sheikhchizenga@yahoo.com)

A. Hokororo  
Tanzania Episcopal Conference  
0741 332656  
[tec@cats-net.com](mailto:tec@cats-net.com)

Jacob Kahemele  
Christian Council of Tanzania  
0744 564557  
[kahemele@hotmail.com](mailto:kahemele@hotmail.com)  
[cct-gs@do.ucc.co.tz](mailto:cct-gs@do.ucc.co.tz)

John Laiser, Coordinator  
Evangelical Lutheran Church in Tanzania, Arusha diocese  
0277 2509974  
0744 761295  
[johnlaiser@yahoo.com](mailto:johnlaiser@yahoo.com)

Mrs. Kipuyu  
UZIMA Site, Arusha

*Zonal Training Center in Arusha, Centre for Educational Development in Health in Arusha (CEDHA)*

Dr. Jincen, Tutor, Acting Principal  
0744 360991  
027 2548281  
[cedhatz@cedha.ac.tz](mailto:cedhatz@cedha.ac.tz)

Dr. Ben Mboya, Tutor  
Mrs. F. Nedki, Tutor

*Heifer Project International*

Mrs. Mallay, National Gender Training Coordinator  
Porches Bureta, Monitoring and Evaluation

*Rapid Funding Envelope*

Joe Eshun, Grant Manager  
Deloitte & Touche  
022 2116006  
[RFE@deloitte.co.tz](mailto:RFE@deloitte.co.tz)

*Ministry of Health*

Dr. Yahya Ipuge, Head, Diagnostic Services, Secretariat for PMTCT  
[yipuge@moh.go.tz](mailto:yipuge@moh.go.tz)  
0744 264219

Dr. Angela Ramadhani, PMTCT Coordinator  
[arshayo@moh.go.tz](mailto:arshayo@moh.go.tz)  
0744 266 333

Mrs. Monica Nganyani, PMTCT Secretariat, Nutritionist  
0744 666214

Dr. H. Ngonyani, Health Service Inspectorate Unit (HSIU–QI/IP)  
Ministry of Health (0744 264359)

Dr. Gabriel L. Upunda, MOH Chief Medical Officer  
Ministry of Health  
2120261 ext 246/247; fax 2138060; 0744 222268  
[www.moh.go.tz](http://www.moh.go.tz)

*PACT Tanzania*

Dan Craun-Selka, Country Director  
Dar es Salaam (Tel: 022 2600305/6; fax: 2600310)  
[dan@pacttz.org](mailto:dan@pacttz.org) (0744 805347)  
[www.pactworld.org](http://www.pactworld.org)

*Sexual and Reproductive Health*

Gottlieb Mpangile, MD (0744 477495)  
[mpangile@africaonline.co.tz](mailto:mpangile@africaonline.co.tz) (022 2136937)

*Pharm-Access International*

Geert Haverkamp  
[g.haverkamp@pharmaccess.org](mailto:g.haverkamp@pharmaccess.org) (316 505 18807; 0744 972946)  
Pharm Access International  
The Netherlands (Tel 31 20 5210700; fax 31 20 5210799)  
[info@pharmaccess.org](mailto:info@pharmaccess.org)  
[www.pharmaccess.org](http://www.pharmaccess.org)

*Iringa*

Durtan Mpangile, RACC  
Angelui Mhetla, Population Services International Regional Manager  
Jimmy Innes, Student Partnership Worldwide Program Manager  
Dr. John Hillary, Evangelical Lutheran Church of Tanzania Iringa Diocese (0744 434006)  
Ms. Lilian Shoo, Marie Stopes MAK (0748 358008)  
Mr. Phillotheus Njuyuwi, Iringa Develop Youth and Disabled Children (0744 391542)  
Mr. Godlove Farasi, DACE (0744 391542)  
Daudi Nasib, Partnership Advisor, USHP (0744 268777)  
Dr. Mwakajila, Collegio Universitario Aspiranti e Medici Missionari Regional Director  
(0744 576 454)

*Mafinda District*

Dr. Kinyaga, DMO  
Dr. Mbala, MO  
Dr. Makombe, DMO  
Haliga Hida, District Executive Officer (0744 458 266)  
Salome Kangwezi, Mwakaumu

*William J. Clinton Presidential Foundation*

Alice Kang'ethe (0744 038694)  
Edwin Macharia (0744 604964)  
Ed Wood (0744 605312)  
Linda Wood  
Megan O'Brien (0744 038673)



*National Bureau of Statistics*

Said Aboud (0744 373581)

*Mbeya Cement Company*

Anthony Malamba (0744 596559)

Stanley E. Mwanyika (0744 279378)

Philemon Mwalusamba

Erasto L.M. Kamnde (0744 292107)

Jesnala Mwamlima (0744 362616)

Albert H. Kilato (0744 885257)

Dr. Sewangi Julius RACC, Regional Medical Office

H A Lyuanda MACC

Dr. Eleuter Samky, Director, Referral Hospital (0741 260224)

Dr. Jamil Kaguna Director, Regional Hospital

Oliver Hoffman, Project Coordinator, University of Munich

Aloya Kimaro, Population Services International zonal manager

Dr. Mligo Elaius, AMO—Igawilo health Centre

*Kihumbe NGO Mbeya*

Florence Mwahawyamale, Coordinator

Elia Mwafulage, Accountant

Charles Mhagewa, Counselor

Eva Lutangila, Counselor

*Primary Care Health Institute*

Dr. R.B. Momburi (0744 310 208)

Dr. H.S.S. Shemhilu (0744 362201)

Moses E. Fusi

Dr. J.S. Mosha (0744 362294)

Damian Mwanwongi (0744 579832)

## **Annex E**

### **Scopes of Works and Methodology**

#### **I. Purpose**

USAID/Tanzania is designing a new ten-year country strategy, to be submitted to USAID/W by April 2004. As part of this effort, the mission seeks the services of consultants to complete necessary assessments that will help in designing the new AIDS strategy. The mission has recently completed assessments on youth; care and support; programs in Zanzibar; and as part of its initial design for the President's Initiative on Prevention of Mother to Child Transmission, on capacities for PMTCT including an assessment of logistics capacities (which will start in the coming months). The announcement of the new Presidential Emergency Plan for AIDS Relief has prompted the mission to expand the scope of its analytical agenda in preparation for an eventual AIDS treatment program.

As a result, the mission seeks the services of consultants for the following:

- Assessment of prevention strategies and activities in Tanzania (one international and one Tanzanian consultant for 3 weeks each)
- Assessment of capacities for a scaled up treatment program (including human capacity needs) (one international and one Tanzanian consultant for 3 weeks each)
- Assessment of the global and local resource environment for AIDS (one international consultant for 5 days in Washington, DC; one Tanzanian consultant for 5 days in Dar es Salaam)
- Summary assessment document pulling together findings and recommendations of these and existing assessments in the form of an AIDS sector assessment (one international and one Tanzanian consultant for 3 weeks each).

The companion scope of work submitted by USAID is for technical assistance to design the strategy. Ideally the international consultant identified to prepare the AIDS sector assessment should participate in the strategy design (possibly as team leader).

#### **II. Background**

USAID/Tanzania has supported implementation of HIV/AIDS programs in Tanzania since the late 1980s: USAID first provided services through the global AIDSCOM and AIDSTECH mechanisms (late 1980s through 1993), in close consultation and collaboration with the Ministry of Health National AIDS Control Program (NACP). Programs included peer education (with NGOs and trade unions); care and support (through support to WAMATA); prevention in high transmission areas (through partnerships with AMREF and other local NGOs); behavioral research activities (with Muhimbili University College of Health Sciences); STI research activities; and the Salama Social marketing program.

Under the follow-on AIDSCAP program, the mission continued funding these same activities while designing the Tanzania AIDS program (TAP) (1993-1999). Under TAP, USAID

stimulated establishment of regional partnerships between NGOs, faith-based organizations, government and the private sector whose objective was to cluster services around targeted populations in a number of regions of the country. Implemented by Family Health International, the TAP successfully assisted the Ministry of Health National AIDS Control Program in coordinating the response to AIDS. Through grant and other mechanisms, USAID financed prevention and care and support services by regional clusters of NGO, private sector and government organizations.

Mirroring the government's decentralization efforts, USAID's programs designed as part of the current strategy (1999-2004) in HIV/AIDS then moved the concept of public-private partnerships to district level: today, the Voluntary Sector Health Program implemented by CARE in collaboration with partners including JHU and Healthscope Tanzania builds capacities of district level partnership committees who are charged with planning, monitoring and evaluating community action through award of grants to community-based organizations. At national levels, USAID now funds the AMREF ANGAZA voluntary counseling and testing program and, in partnership with two other donors (DfID and Royal Netherlands Embassy), the Salama Social Marketing Program. Support to the government of Tanzania is channeled to the Tanzania Commission for AIDS and the Ministry of Health (National AIDS Control Program; Directorate of Preventive Services; and Reproductive and Child Health Services): USAID and two other donors finance the TACAIDS Ishi communication campaign targeting youth; through creation of a rapid funding envelope for HIV/AIDS, USAID and seven other donors are giving TACAIDS experience and visibility in awards to NGOs; and through technical assistance from collaborating agencies, USAID is supporting leadership within TACAIDS and among three networks of stakeholders. In addition USAID was designated as lead donor among the bi and multilateral partners contributing to the development of a Health Sector HIV/AIDS strategic plan, which was completed in March 2003.

US government funding for the response to HIV/AIDS is increasing significantly: in FY2002, USAID/Tanzania's HIV/AIDS budget totaled \$8M. In FY2003 this figure will increase to \$17.25M and in FY2004, to \$18.5M. Resources available for Tanzania's national response are increasing across the board from bi- and multilateral donors, from new global mechanisms and from international. In this climate, it is essential for USAID/Tanzania

- a) To put mechanisms in place using new funds that will concurrently address key priorities identified in the national response and have the impacts on the epidemic required by USAID and the government of Tanzania
- b) To make strategic decisions regarding its investments so that USAID's input complements ongoing and planned government, donor, private sector and civil society programs and magnifies the impact of total resources available for combating HIV/AIDS in Tanzania.

USAID Tanzania has initiated the process of designing a ten-year country strategy for the period 2005-2015. The proposed strategy will include a HIV/AIDS objective that builds on what the mission has achieved in fifteen years of AIDS programming in Tanzania and expands to new areas in prevention, care and support and impact mitigation. Finally, the

mission strategy will be multisectoral, building linkages with other mission strategic objectives including democracy and governance, economic growth and natural resource management.

The mission is submitting an interim expanded AIDS strategy to USAID/W (as required for missions receiving more than \$1M in AIDS funds) in June 2003. The interim strategy will cover the period 2003-2005, expanding on what was designed as part of the integrated health and AIDS strategic objective in 1998 for implementation during the period 1999-2005.

To facilitate expanding the scope of its activities as part of the interim strategy and to prepare for the design of the new 10-year strategy, the mission has completed a number of assessments and analyses. These include an assessment of care and support programs and opportunities; and a program assessment focusing on initiatives targeting youth. The mission has also completed an evaluation of its program to support nongovernmental organizations working in HIV/AIDS in Zanzibar. Finally, the mission has received requests from the Tanzania government (Ministry of Health, Tanzania Commission for AIDS and National Bureau of Statistics) to support a national survey tentatively called the Tanzania HIV Indicator Survey. Measure DHS will be responsible for this activity, which is scheduled to start in late 2003. (Results will not be available until late 2004.)

### **III. Scopes of Work**

#### **A. Assessment of Prevention Programs**

The purpose of the assessment is to document existing prevention programs and activities at national and community levels that have had impact on behaviors of different target groups. For the purposes of the consultancy, prevention activities include, but are not limited to behavior change communication (including “ABCs”); voluntary counseling and testing, public and private sector condom distribution; prevention of mother to child transmission; education (in particular for girls); economic empowerment of vulnerable groups (youth, women).

In its current strategy (1999-2005), the mission supports national-level prevention efforts as well as community programs in five regions the country. Target populations include the general population; youth; women and children; People Living with AIDS; and high risk populations. The mission currently manages a range of successful prevention interventions including social marketing of condoms; voluntary counseling and testing (including a social marketing component); BCC campaigns for youth (through several mechanisms); and community-based prevention through an umbrella grant mechanism that is active in all 32 districts of 5 regions of the country. The mission has completed assessments for PMTCT and will initiate under its interim strategy a national PMTCT program in collaboration with CDC and under the leadership of the Ministry of Health. The PMTCT program is expected to be a major activity in the 2005-2015 strategy.

Specific tasks include the following:

- Identify existing best practices appropriate for Tanzania (from international and Tanzania experiences) and their strengths, weaknesses, target populations, scope and funding requirements
- Identify the planned strategies, ongoing and current thinking on prevention, available resources among government, NGO and private sector partners
- Identify linkages (between national and community programs; between supporting institutions such as NACP and other Ministry of Health offices, TACAIDS, Zonal Training Centers, Ministry of Education, other) that are required for prevention approaches to succeed
- Identify technical assistance needs and resources for scaling up prevention programs in Tanzania (individuals, organizations, training institutions)
- Identify constraints to successful HIV/AIDS prevention programs (policy, social norms, resources, technology)

### **Qualifications**

For the prevention assessment, USAID seeks the services of a 2-person team (one Tanzanian and one international). Key qualifications include:

- Advanced degree in communication, health or social sciences
- Excellent spoken and written English skills; fluent Kiswahili (for the Tanzania consultant)
- Experience in working with USAID, including in drafting and finalizing USAID reports and strategies
- Knowledge and experience of HIV/AIDS prevention programs and issues in Tanzania including familiarity with government, donor and NGO programs
- Strong analytical skills

USAID anticipates needing a two-person team (one international and one Tanzanian) for a period of 3 weeks each (including literature review, interviews and field visits to USAID and other prevention programs in Tanzania; and preparation and finalization of the assessment report).

The Mission would like to complete the prevention analyses by the end of August 2003.

### **Deliverables**

The deliverable will include a draft report submitted for comments and a final report incorporating mission comments. The report should be concise and focused on providing the mission with material it can use in preparing its ten year (2005-2015) strategy document.

## **B. Assessment of Capacity of Health System to Respond to Treatment Needs for HIV/AIDS**

### **1. Systems issues**

The purpose of the assessment is to compile and summarize existing information about the ability of the Government of Tanzania to respond to the changing situation in relation to treatment for HIV/AIDS, resulting from increased demand for and resources available to fund ARVs.

The President's Emergency Plan for AIDS Relief has mandated that 55% of the total \$15 billion funded under this new Initiative should be spent on Care and Support activities, of which 75% of this amount should fund ARVs or other drugs and related support systems. The current analyses prepared by USAID/Tanzania to inform the development of their new HIV/AIDS strategy do not include any background information on the current situation related to treatment. Family Health International carried out an assessment of Care and Support needs in late 2002, but this review did not address treatment.

For the purposes of developing the new strategy, it is essential to prepare a brief review of existing studies related to the logistics, laboratory, and personnel capabilities that would be needed for an effective national treatment program. In addition, because studies are limited, it is important to carry out interviews with key informants to assess likely constraints to effective delivery of treatment, donor plans for supporting expanded treatment services, and plans for scale up of related services, including PMCT Plus and VCT. The Clinton Foundation, for example, is planning to support a major ARV intervention in Tanzania. The review and interviews will inform decisions on the scope of USAID's proposed activities under the new strategy, specifically the extent to which USAID should fund systems support.

Recent and planned studies that are relevant to assessing the readiness of current systems to support an expanded treatment program include a study by Deliver, in 2000, of commodity progress; work by CDC to assess laboratory capabilities, and a stock-out survey planned by Deliver for 2003.

Specific tasks include:

- Identifying, with the guidance and assistance of USAID/Tanzania, relevant studies and reviews of HCD in the past few years, and reviewing these studies
- Identifying the planned strategies, ongoing and current thinking on HIV/AIDS treatment (including treatment policies, procurement and distribution issues, laboratory services, and training for medical and laboratory personnel), planned and required linkages with related services (PMCT, PMCT Plus, VCT), and proposed resources. This will be carried out through interviews with key informants among government partners (including NACP, TACAIDS, and other agencies), donors, and representatives of the private sector and NGOs.

- Based on the study review and interviews, produce an assessment report that:
  - Describes the government, donor-funded, and private sector interventions currently operating or planned for the next five years or less (2003-08), including source of funds
  - Identifies the main needs and constraints to an effective national treatment program (focusing particularly on logistics issues)
  - Identifies technical assistance needs and resources for scaling up treatment programs in Zambia, including ensuring a reliable supply of drugs and other commodities.

## **2. Human Resources Capacity Development Needs**

The purpose of the assessment is to summarize existing reviews and studies on human capacity development (HCD) needs in Tanzania, focusing particularly on the needs of medical personnel, including doctors, nurses, and allied medical professionals. The purpose of the consultancy is to provide an overview of recent information as a basis for assessing the need for addressing this issue (possibly including in-depth studies) as part of the HIV/AIDS strategy.

Most health facilities in Tanzania are agreed to be operating at 50% of their potential capacity, largely owing to a lack of personnel. Health personnel are overworked and often inadequately trained for their positions. The inability of the health system to respond adequately to HIV/AIDS while maintaining other health services is also rooted in systemic issues, including policy constraints, issues of health staff conditions, certification requirements, and an underlying organizational culture that does not reward performance.

It is not possible or expected that this preliminary review will carry out an in-depth assessment of HCD needs for HIV/AIDS, child survival and reproductive health services in Tanzania. However, several studies, reviews, and meetings related to HCD have been carried out in the last three years. These include a study by the Horizons Project on the role of training in affecting performance, studies of health personnel deployment planned by Emory University, a study by the Centre for African Family Studies and the Regional AIDS Training Network to assess perceptions of training needs in HIV/AIDS, and a meeting held by the Commonwealth Regional Community Health Secretariat to review medical and nursing school curricula in HIV/AIDS.

Specific tasks include:

- Identifying, with the guidance and assistance of USAID/Tanzania, relevant studies and reviews of HCD in the past few years, and reviewing these studies
- Briefly summarizing these studies, focusing on the range and reliability of the study, and key conclusions reached, including major areas of need, constraints, and study recommendations.

- Identifying the planned strategies, ongoing and current thinking on HCD (including training, performance systems, tracking of health personnel, certification and policy issues) and available resources through supplementary interviews among government partners including NACP, TACAIDS, and other agencies; leading training institutions; and selected donors to discuss and validate the summary.

## **Qualifications**

For the assessment, USAID seeks the services of a 2-person team (one Tanzanian and one international). Key qualifications include:

- Advanced qualification in public health
- Excellent spoken and written English skills
- Experience in working with USAID, including drafting and finalizing USAID reports
- Knowledge and experience of human capacity development, performance management or training approaches
- Knowledge of and experience in the management of logistics systems for drugs and commodities, including those for HIV/AIDS

USAID anticipates needing the two-person team for a period of two weeks each (for literature review, interviews in Tanzania and preparation and writing the final report).

The Mission would like to complete the review and summary by August 2003.

## **Deliverables**

A final report, containing the information given above (under Scope of Work), and including a bibliography and list of those interviewed.

The report should be concise and focused on providing the Mission with material it can use in preparing its ten year (2005-2015) strategy document.

## **C. Tanzanian resource environment for HIV/AIDS**

This assessment provides an update on information on the Tanzania resource environment for AIDS. UNAIDS conducted an extensive mapping of donor contributions to AIDS in late 2002; this was revised and included in the country's first Public Expenditure Review for AIDS, including projected contributions for the Tanzania 2003-2004 fiscal year; and finally, the Clinton Foundation is currently asking all of Tanzania's development partners to complete a questionnaire with information regarding current and projected support for AIDS in the country. As a result, the Tanzania-based consultant's role will focus on pulling information from these sources together rather than extensive consultations with donors regarding their current and projected contributions for AIDS in Tanzania.



## Qualifications

USAID seeks the services of a consultant who will complete the scope of work in Tanzania. Key qualifications include:

- University degree (preference for expertise in finance related field)
- Strong English-language writing skills
- Experience in working with USAID, including in drafting and finalizing USAID reports and strategies
- Knowledge and experience of HIV/AIDS financing issues in Tanzania, including familiarity information on bi and multilateral, voluntary sector and FBO funding sources and with Ministry of Finance and other Tanzania government methods for recording external assistance
- Understanding of new funding modalities and lessons learned in their application in Tanzania (Swaps, basket funding, budget support and related PERs and MTEFs)
- Strong analytical skills

USAID estimates that this consultancy will take a maximum of 5 person days including literature review, interviews and report writing. The mission seeks a consultant who can complete this task by August 15, 2003.

## Deliverables

The deliverable will include a draft report submitted for comments by August 1, 2003 and a final report incorporating mission comments by August 15, 2003. The report should be concise and focused on providing the mission with material it can use in preparing its ten year (2005-2015) strategy document.

## D. AIDS Sector Assessment

A number of studies and analyses have been completed on the situation of AIDS in Tanzania over the past year, including assessments commissioned by USAID. The sector assessment will build on existing literature.

- Reviewing the various assessments undertaken/to be undertaken by the mission as part of the strategy development process
- Reviewing other relevant and up-to-date information on AIDS in Tanzania
- Interviewing team members, partners and other stakeholders
- Preparing a sector assessment that will serve the mission in developing its new AIDS strategy based on summaries and analysis of assessments already completed by USAID and other stakeholders over the past 18 months and based on the prevention and resource environment assessments that will be completed by August 2003.

For the sector assessment, USAID seeks two consultants, one international and one Tanzanian. Key qualifications include:

- Advanced degree in communication, health or social sciences
- Excellent spoken and written English skills; fluent Kiswahili (for the Tanzania consultant)
- Experience in working with USAID, including in designing, drafting and finalizing USAID reports and strategies
- Knowledge and experience of HIV/AIDS prevention programs and issues in Tanzania including familiarity with government, donor and NGO programs
- Strong analytical skills
- Strong facilitation skills
- Proven track record in participatory program design

USAID anticipates that the scope of work will require the following level of effort:

- AIDS sector assessment: three weeks per person for a total of six weeks

### **Deliverables**

The deliverable is a draft report submitted for comments by and a final report incorporating mission comments which represents the AIDS sector assessment. All reports should be concise and focused on providing the Mission with material it can use in preparing its ten year (2005-2015) strategy document.